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American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, February 10, 1855.

New York and Harlem Railroad.

We give in another column the late report of the President of this company, showing its present condition, the losses arising from the Schuyler frauds, and, to a certain extent, the previous management of its affairs.

The report will get credit for its apparent truthfulness, and it certainly carries with it evidence of great pains-taking. There appears to be no disposition to withhold from the public anything that may help to form a correct idea of the present condition of the company's affairs, or the mistakes committed in its previous management. While the report presents a frankness of statement and a fulness of detail which are in gratifying contrast to the ordinary rule of other companies the satisfaction to which this gives rise, is neutralized by the necessary inference which it leaves of the impossibility of preventing the recurrence of similar frauds. The report tells us that fraudulent entries were made, important items suppressed from previous reports, dividends declared that were never earned, ruinous contracts made with other companies, &c., &c., yet that the Directors have been in no degree faulty. All these misdeemeanors are chargeable to Mr. Robert Schuyler,

who was not even President of the road, when many of them were committed. We quote a portion of the report which presents one of Mr. Dean's attempts to vindicate the Board from censure.

It is notorious, that at no time when a dividend has been declared, was the money in the treasury with which to pay it; each semi-annual period put the company in the market as borrowers; and if the frauds of the late Secretary had not been perpetrated, and everything left to move in the beaten track; the company could not have gone on for a long period before its increasing embarrassments would have forced minute and painstaking investigations, and the facts above indicated have been disclosed.

In making up the statements of the earnings and disbursements of a railroad, for a dividend, consisting, as it necessarily must, of various elements and numerous items, a board of directors is almost entirely within the power of its principal officer, and so long as the "Construction account" remains open, he may, if so disposed, most effectually mislead them.

No man, heretofore connected with railroads in this country, ever achieved a greater reputation for ability in their Management, than Mr. Robert Schuyler. So universal was this estimate of him, that it would have damaged the character for sagacity of any man, who might express a doubt on the subject; nor was he less universally esteemed for his honesty and perfect integrity. This board in common with all others with which he was connected, felt secure under his administration of its affairs; he it was who made up the semi-annual statements upon which dividends were declared, and voluntarily did the same service, even after he had left the presidency of the road.

The Board, therefore, has no hesitation in saying that it has exhibited as much vigilance, and been as scrupulous in the matter of dividends, as would have been any like number of gentlemen chosen from the body of stockholders.

Now, it strikes us that these extracts convict the directors of the very offence from which the report seeks to vindicate them. If it be notorious that the dividends were declared which were never earned, ought a Board of Directors to declare one? ought they to declare one, unless they knew it to have been earned? Mr. Robert Schuyler was not the principal officer of the Board for 1854, during which dividends were fraudulently declared, and fraudulent entries made in the company's reports. Is it any excuse for a Board of Directors to say that they knew nothing as to whether a dividend had been earned or not?

We think not. By assuming its trusts, they agree to attend to its duties; and ignorance of them is the last plea which a court of justice or common sense will accept.

Again, the report states that till his fall, Mr. Schuyler was regarded as a paragon of virtue so exalted, that to question it "would have damaged the character of any man who should express a doubt upon the subject; nor was he less universally esteemed for his honesty and integrity!"—Judged by the standard of his associates, he may have been such a man; but this very fact only shows the lowness of their standard rather than the exaltation of the subject tried by it. It is certainly notorious that Mr. Schuyler enjoyed the reputation of being a contractor, and of making vast sums of money out of roads of which he was President. Now, here are incompatible relations. As President, he assumed to act as the agent, and for the benefit of his principals. As contractor his object was to make money out of the same parties, who had set him to guard their interests. The law will not permit a man to sustain such relations. Experience tells us that men will not act honestly in them. The highest authority tells us that no man "can serve God and Mammon." Yet a man who was in the continual and notorious practice of prostituting his place and his duties to his private interests, stands out in the report as the perfect incarnation of the virtues of honesty and integrity.

We know of a great many people who entertained for years very different opinions of Mr. Schuyler; and we do not see how a man with half an eye could come to any other conclusion. They reasoned thus:—"Mr. Schuyler has the reputation of being interested in contracts on roads of which he is President or Director, and of having made his fortune in this manner. A person cannot honestly sustain such relations, and a flaw in one spot may run through the whole man." They would therefore have nothing to do with him, and consequently were not injured by his frauds. It is now easy to see how simple and legitimate was this mode of reasoning, and how blind people were not to apply it at the time. What if it were notorious that the President of the Erie road was interested in important contracts on the line of that road? Would the community trust that company with a

dollar? Not one! Had there been a breath of suspicion that such was the case, instead of being able to borrow money to meet the Income Bonds, they would have been protested, and the road would have been bankrupt.

So far from helping the matter, that portion of the report devoted to the vindication of the Directors, instead of accomplishing its objects, throws great discredit and distrust upon the whole. We by no means believe that all of its members were ignorant of the malfeasance of Schuyler.—They must have known, as the report states, that upon every dividend the company were thrown into the market for money. They undoubtedly helped to raise this money. The most cursory examination would have detected the fraudulent entries. Where was the Treasurer's report? There must have been one which showed the receipts and expenditures in detail. Why was this not looked into and compared with that of the President?

But the discounts, commissions, &c., are probably only a small part of the loss which the company have sustained. The cost of the road has reached nearly \$80,000 per mile. We have no doubt that a very considerable portion of this vast sum has been profits on unconscionable contracts of which doubtless more than one member of the board has been interested. While upon the subject of the abuses of the management, why not give us the nature of these contracts, and the names of the parties interested in them? Why not at the same time, tell us in what manner and to what parties has the enormous sum of \$1,300,000 in commissions, &c., &c., been paid? Let us see, while we are about it, how our roads are built and managed. The report is sufficiently courageous when dealing with a fallen man who has fled the country; but it appears to us to lose this virtue entirely when called to criticise the acts of parties who are to be immediately confronted.

Chicago and Rock Island Railroad.

The recent report of this company has been ushered forth with no small flourish of trumpets, and the inattentive reader would come to hardly any other conclusion but that this company was the very personification of everything wise and virtuous within the scope of railway management. As a specimen of what the company assumes to be, we copy the following from the Report of the Treasurer, Hon. A. C. Flagg.

"The great financial error in the railroad system generally seems to be, that the construction account is permitted to run with the road; whereas, when the road is completed and in operation, the construction account should be stopped.

Another error is in creating stock which is not represented by the sum actually expended in the construction of the road, or in its equipment. If the money obtained on account of the bonds and stock issued is faithfully applied to the construction of a railway, the owners of the stock and bonds would, in most cases, have a reasonable guarantee for a just remuneration on the sums advanced.

When a new road is in successful operation, the claims of the stockholders for a dividend of all the earnings beyond running expenses are very strong; and often, the desire of profitable operations by inflating the stock, has a still stronger influence in producing large dividends. As the stock becomes desirable, every requisition for an increased expenditure is promptly met by a new issue of stock. The result is, that at the end of five or ten years, the capital stock on which dividends are to be declared, is found to be double

what it was understood to be at the time the road purported to be finished. And the stockholders, after luxuriating for years on 10, 12 and 15 per cent. dividends, with an occasional extra dividend in stock, are informed that a dividend will be paid to them provided they will take the amount out of a new issue of stock or bonds at par.

The severity of the times, and the illegal issue of a limited amount of stock, have produced investigation and developed the great errors in the financial management of the railroad system generally. Commencing operations at the very time of these developments, shall we be held blameless if we fail to correct the errors which now must be apparent even to those who have been tempted to commit them?

If the course above suggested had been generally adopted fifteen years ago, and firmly adhered to, it would have saved a hundred millions of dollars to those confiding men who have aided these important improvements by putting their money in them. And resting on such a broad and firm basis, the public confidence in the great mass of railroad securities could not have been so completely broken up, and its withering influence extended to twenty thousand miles of these works of conceded utility, interwoven with all the business interests of the country and essential to their success, by an over-issue of two millions of dollars, confined to a single railroad, sixty miles in extent."

All this is very fine talk. Let us see how it corresponds to practice.

In the report of the President we find the following paragraph:

"The Peoria and Bureau Valley Road is now in operation its entire length, and will be fully completed for delivery on the first day of February. In pursuance of a resolution of the stockholders, at their last annual meeting, a perpetual lease of this road has been drawn up, and only requires the signatures and seal of the two companies to perfect the same. The value of this important auxiliary to our road can hardly be over-estimated, giving, as it does, access the year round, to the large traffic of the valley of the Illinois. Its income, over and above the rent, will, doubtless, soon become an important addition to the large annual receipts of the company. The addition of these forty-seven miles to our road is another reason for largely increasing our rolling stock at this time, and the necessity of early and greatly increased facilities in this city for the heavy produce freight of both roads."

The proposition to lease an independent line naturally excited an interest to ascertain its terms. We look in vain for them in the report of the President. We have given the only allusion which his report contains. We turn to that of the Treasurer, so pregnant in wisdom and so denunciatory of all practices by which *bogus* stock works its way into our companies, till it becomes an enormous *fungus*, disgusting to behold, but impossible to reduce. But we find no reference whatever to the lease, save the following note subjoined to his report, but which forms no part of it.

"The lease of the Peoria and Bureau Valley Railroad to which the President alludes in his report, page 8, has been executed since that report was prepared."

In despair we turn to the report of the Chief Engineer; certainly a very unlikely source of light. The only reference to this matter is contained in the estimate of expenses for the current year, viz. "Lease of Peoria and Bureau Valley Railroad, \$125,000." Here then is an act accomplished which is not exceeded in importance by any one within the scope of the powers of a railroad company, in reference to which, in the annual report of the company which announces it, only the vaguest allusion is made. Now ought not

such transaction to have been spread, in all its details, before the stock, convertible bond-holders and the public? Are they not interested to know upon what terms this lease is executed; why it was made perpetual and not for a limited period; and upon what estimate of cost; whether the road is to be equipped or maintained by the Rock Island or Chicago company, or by the Peoria and Bureau Valley company; what is its prospective income, &c., &c.? If it has become a component part of the main line, why not give us a history of its financial condition and prospects, as well as of the main line? Is there any good reason for this studious concealment? We think there is a reason, a very bad one, we confess, but undoubtedly sufficient in the eyes of those making the report, and who were party to the transaction.

In the absence of any authentic statement as to the terms of the lease, we understand it to be perpetual, and that the Rock Island and Chicago company equip and maintain the road. The annual rent is \$125,000, which is seven per cent. on \$1,800,000, or nearly \$40,000 per mile. The road is 47 miles long, over a favorable route. We should say that roads over similar routes in the West could be put in as good condition as was the Peoria and Bureau Valley Railroad, at the time of the execution of the lease, for \$15,000 per mile, for an aggregate of \$700,000. Such being the fact, the selling it out for \$1,800,000, or \$1,100,000 profit to the Rock Island and Chicago Railroad, must have been a very good contract for *somebody*. Let us see how this was done.

The contractors for the Rock Island road were Messrs. Farnham and Sheffield, Directors in the road, who from their position exerted a controlling voice in its management. The same parties, united, we believe, with Messrs. Durant and Wolcott, also Directors in the road, were, we understand, contractors for the Bureau Valley Railroad. Now if they could sell for \$1,800,000 a road which cost \$700,000, the amount of the profit was very apparent. Of course, we cannot state what the exact cost of the Bureau Valley Road has been, for this fact has been kept studiously out of sight, but we do not believe it has been greater than the sum stated. We will also suppose, what we presume will not be controverted, that Messrs. Farnham, Sheffield and others own the road. We think, therefore, that the public will no longer be at a loss to account for the manner in which the matter of the lease was slid over in the Rock Island Company's report. Whether the sermon which it contained upon railway morals was only a *demonstration*, to divert attention from the real point of attack, we leave to others more skilled in operations than ourselves to decide.

The evil practices forcibly exposed by Mr. Flagg, that of introducing fictitious stock into railroad companies, has not only been practised to a very great extent by his own company, but this has been done in the most inexcusable manner possible, that of leasing *branch* lines, which is the Devil's own invention for defrauding helpless stockholders. How such a man as Mr. Flagg could allow such transactions in a company of which he is Director and Treasurer, to pass without reprobation, is more than we can account for; believing, as we do, that he was not profited thereby. Not a single argument can be urged in favor of the lease. The road

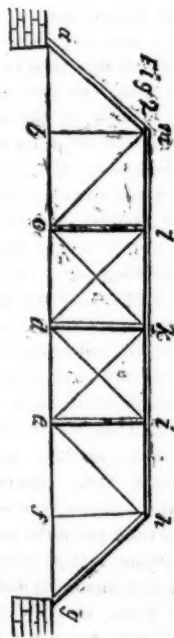
is only just opened and the degree of its success is entirely problematical. There can be no pretence that the net income of the Bureau Road will be \$125,000 per year. There was no danger that its business would be drawn off in another direction or that it would go into the control of hostile interests. It was simply an operation by which the stockholders in the Rock Island pay a gratuity of about \$70,000 per year, and for which they receive no consideration.

The above act will show to stock and bond holders the dangers to which they are constantly exposed. If they have a good road, they may rest assured that a grand foray will be made upon it, which in one way or another is pretty certain to be successful. One of the most common modes of attack is the one that has been so successfully carried in the above case, that of annexing branch lines at twice or thrice their cost. Every stock and bond-holder before investing in a road should see that such an agreement is entered into in the outset, by which the original object of the company cannot be departed from without unanimous consent.

(For the American Railroad Journal.)

I have been requested by several readers of the JOURNAL to give demonstrations in relation to the maximum strains upon the several parts of the bridge truss represented by Fig. 2. in my communication published in the JOURNAL on the 13th January instant. It is hoped the following will be found intelligible and satisfactory.

ALBANY, 29th Jan'y, 1855. S. WHIPPLE.



Calling Fig. 2 a bridge truss, in which the parts indicated by double lines are so formed and connected as to be capable of acting only by thrust, and the parts represented by single lines, only by tension; the connexions at the points indicated by the letters of the figure, may be regarded as movable joints; and the effects of weights applied at the points *b, c, d, e, f*, will be as follows:—

Firstly, a weight *w* at *b* will, on the principle of the simple lever or beam, bear 5-6th of the

weight at *a*, and the other 1-6th at *g*. But the weight at *b* can only bear at the points *a* and *g*, through the media of the vertical and diagonal parts; since the other parts act horizontally, and not by any means in opposition to gravity; and supposing an additional diagonal tension-piece from *b* to *l*, the 1-6th *w* bearing at *g*, must obviously be first transferred by tension of *bl* to the point *l*, the tension on *bl* being to the weight sustained, as the length of *bl* is to that of *cl*; that is, equal to 1-6th *w* $\sqrt{2}$; since *bc* is assumed to be equal to *cl*.

From *l* the pressure is transferred through *lc* to the point *c*, producing simply a thrust on *lc*, equal to 1-6th *w*. In like manner, the pressure is transferred by tension and thrust alternately, through *ck, kd, di, ie*, and *eh* to the point *h*, and thence by thrust through *hg* to the point *g*, producing tension equal to 1-6th *w* $\sqrt{2}$ on each of the oblique tension-pieces *ck, di*, and *eh*, and a like thrust of 1-6th *w* $\sqrt{2}$ on *hg*; also a thrust on *kd* and *ie*, equal to simply 1-6th *w*. On the other hand, 5-6th *w*, the portion bearing at *a*, is transferred through *bm* and *ma*, with a tension of 5-6th *w* on *bm*, it being simple direct suspension, and a thrust equal to 5-6th *w* $\sqrt{2}$ on *ma*.

Secondly, a weight *w* at *c*, on the same principles, bears 4-6th at *a*, and 2-6th at *g*, producing a tension equal to 4-6th *w* $\sqrt{2}$ on *cm*; and a like thrust on *ma*; also a tension equal to 2-6th *w* $\sqrt{2}$ on *ck, di*, and *eh*, a like thrust on *hg*, and a thrust equal to 2-6th *w* on *kd* and *ie*.

Thirdly, a weight *w* at *d*, bears one-half, or 3-6th *w* at each of the points *a* and *g*, producing tension equal to 3-6th *w* $\sqrt{2}$ on *dl, cm, di*, and *eh*, a like thrust on *ma* and *hg*, and a thrust equal to 3-6th *w* on *lc* and *ie*.

Fourthly, weights at *e* and *f* produce exactly the same effects on verticals and diagonals, in a reversed order, as we have seen to be produced by weights at *b* and *c*.

Now, having considered the effects of a single weight at each point successively, we are prepared to investigate the combined action of weights at several points, as *b* and *c*, one of which tends to give tension on *bl*, and the other on *cm*. But the diagonals, being connected at the angles of the square *acm*, a tension on either one must tend to slacken the other, that is, a tension on *cm* will tend to carry the angles at *m* and *c* farther apart, and to draw those at *b* and *l* nigher together. Consequently, the tension of 1-6th *w* $\sqrt{2}$, which the weight at *b* tends to give to *bl* is counteracted by the greater tendency which the weight at *c* has to produce a tension of 4-6th *w* $\sqrt{2}$ on *cm*, while the latter is reduced by the former tendency, so as to give an actual tension on *cm*, of only 3-6th *w* $\sqrt{2}$.

In this case, the weight at *b*, receiving no support from *bl*, must be sustained entirely by *bm*, giving a tension on that part equal to *w* or the whole weight, and the maximum stress for *bm*; and the weight at *c*, having only 3-6th *w* sustained by *cm*, must have the other 3-6th *w* supported by *ck*, and ultimately by the abutment at *g*, giving the exact pressure at that point, which the weights at *b* and *c* should legitimately produce according to the inevitable laws of statics.

It follows then, since any weight at either of the points *c, d, e, f* tends to produce tension on *cm*, and slacken any tension on *bl*, that *bl* has its maximum tension when the point *b* is loaded, and all the other points; (*c, d, e, f*) without load.

Also, since a load at both of the points *b* and *c*, gives a tension of 3-6th *w* $\sqrt{2}$ to *ck*, and since a weight at either of the points *d, e, f*, tends to give tension to *dl*, and to slacken the tension of *ck*, whereas a weight at *b* tends to increase the tension on *ck*; it follows that *ck* has its maximum tension equal to 3-6th *w* $\sqrt{2}$, when the points *b* and *c* only are loaded.

Again, we have shewn that the combined tendency of weights *w* at *b* and *c*, is to give a tension equal to 3-6th *w* $\sqrt{2}$ to *ck*, while a weight *w* at *d*, tends to produce a tension on *dl* of exactly the same amount. Consequently, these equal and opposite tendencies balance each other, leaving both *ck* and *dl* without tension; whence the weight at *d* receiving no support from the diagonal *dl*, must be sustained wholly by the diagonal *di*, (*e* and *f* being without load,) giving a tension of *w* $\sqrt{2}$ on *di*, which is the maximum strain on that piece, since a weight applied at either of the points *e* and *f*, would tend to give tension to *ck*, and diminish that on *di* by the same amount, while the removal of weight from either of the points *b* and *c*, would produce the same effect, by removing a part of the cause of tension on *di*.

Again, if we apply a weight *w* at *e*, the weights at *b, c* and *d* remaining, the tendency of the weight at *e* is to bear with a pressure of 4-6th *w* at *g*, and 2-6th *w* at *a*, giving a tension of 4-6th *w* $\sqrt{2}$ on *ek*, and a tension of 2-6th *w* $\sqrt{2}$ on each of the diagonals *ek, dl* and *cm*, one of the effects of which is to reduce the tension on *di* from *w* $\sqrt{2}$, to 4-6th *w* $\sqrt{2}$; thus throwing the whole weight at *e* on to *ek*, and giving a tension on that piece equal to *w* $\sqrt{2}$, which in addition to a tension of 4-6th *w* $\sqrt{2}$ received from *di*, through the medium of *ie*, makes an aggregate tension on *ek* equal to 10-6th *w* $\sqrt{2}$, which is the maximum tension for that piece; since the further addition of a weight at *f* has a tendency to give a tension of 1-6th *w* $\sqrt{2}$ to the imaginary diagonal *fi*, and a corresponding diminution of tension to *ek*, reducing it to 9-6th *w* $\sqrt{2}$, which is therefore the stress on that part when the truss is loaded throughout.

But the weight of the structure itself, which has hitherto not been taken into account, has similar effects to what would be produced by uniform weights *x* at each of the points *b, c, d* and *e*, *x* being equal to 1-6th the weight of structure sustained by the truss; hence, the weight of structure tends to produce a strain of 9-6th *x* $\sqrt{2}$, (equal to $1\frac{1}{2}$ times the weight of structure,) on *ek* and *cm*. Therefore no strain can ever come on *bl* or *fi*, except with an adventitious load at *b*, greater than $1\frac{1}{2}$ times the whole weight of structure supported by the truss. Hence, in practice, diagonals are unnecessary at *bl* and *fi*.

The thrust on the uprights *lc, kd*, and *ie*, due to the weights *w, w, &c.*, at *b, c, d* and *e*, being received through the medium of the diagonals running from their upper ends, must have the same ratio to the tension as the length of uprights has to the length of diagonals, that is, as 1 to $\sqrt{2}$. Consequently, *w* $\sqrt{2}$ being the greatest stress on *di* and *dl*, *w* must be the greatest thrust of *cl* and *ei*; and the greatest stress on *ck* and *ek*, (only one of which can act at the same time,) being equal to 3-6th *w* $\sqrt{2}$, the greatest on *dk* is only equal to $\frac{1}{2}$ *w*, and occurs where the points *b* and *c* only, or *e* and *f* only, are loaded.

With regard to the thrust diagonals *ma* and *lg*

it is obvious that these pieces are the media through which all the weights at b, c, d and e come ultimately to bear on the abutments at a and g , since the chord ag can only act horizontally, and neither increase nor diminish the vertical pressure; and no other parts come in contact with abutments. Hence, the greatest thrust on those parts is where the greatest pressure comes on the abutments, which occurs when all the points are loaded, and is equal to $2\frac{1}{2}w$. The thrust of ml and ag , due to this pressure on abutments, of course, is equal to $2\frac{1}{2}w\sqrt{2}$.

The longitudinal stress on the horizontal parts mh and ag , is produced by that of the oblique parts; since the vertical action of gravity, and the thrust of uprights being at right angles with them, can not directly affect them in the direction of their lengths.

Now, the parts ac and eg , sustaining only the horizontal thrust of ma and hg , must have their greatest tension equal to the greatest thrust of these parts divided by $\sqrt{2}$, that is, equal to $2\frac{1}{2}w$.

This same stress must act on ce , in addition to which ce also sustains the horizontal effects of the tension of the diagonals eh and cm , but not the maximum tension of these parts; since this takes place only when one of the points b or f is unloaded. But if b be unloaded giving the maximum strain on cm , and consequently a tension of 10-6th w on cd ; the tension on the same part, (cd), received from ac , is diminished by 5-6th w , in consequence of the diminished thrust of ma . Hence, the greatest strain on cd is under the full load of the truss, where cm and eh have a tension of 9-6th $w\sqrt{2}$, giving a horizontal tension on ce equal to 9-6th w , which, added to the $2\frac{1}{2}w$ received from ac and eg , makes 4 w , the greatest stress on ce .

For reasons similar to those just considered, the thrust on mh is greatest throughout under the full load of the truss; and for the same reason ml is equal to 4 w , the horizontal effects of the thrust of ma , and the tension of mc ; and this stress is transferred to lk , and increased by $\frac{1}{2}w$, by the tension of ld , which, under the full load, is equal to $\frac{1}{2}w\sqrt{2}$. Hence, the greatest thrust on lki equals $4\frac{1}{2}w$.

Origin of Railroads in the United States.

Our attention has been drawn to this interesting topic, by the perusal of a memoir in the "American Portrait Gallery of eminent Americans," recently published in New York, under the special title of "A Sketch of the Life and Public Services of Lt. Col. S. H. LONG of the U. S. Army," from which we make the following extract.

"Within the two years last mentioned (1826 and 1827) the attention of the Public, especially in England, was strongly attracted to railroads, as the most economical, efficient, and expeditious means of conveyance, not only of merchandise, but of passengers. The infection soon spread and began to prevail in the United States. Under its influence, Col. Long was among the first, if not the very first, to engage in the investigation of railroad constructions, with a view to their practical application in this country. While thus engaged (in the winter of 1825-6,) he became impressed with the belief that a locomotive engine, with suitable adjustments and fixtures, might be made to subserve the purposes of conveyance, not only upon level and slightly inclined roads,

but upon gradients ascending at a rate not exceeding three degrees, or 276 feet per mile, by means of a *rack-rail* and *pinion* situated between the rail-tracks; or by means of a drag-rope, rope-rolls, &c.; the engine first ascending alone, or with a portion of its train, to the summit of the incline, and then serving as a stationary engine, to drag up the residue of its load. In 1826, he devised a set of machinery adapted to such a purpose, and prepared a description of the same illustrated by drawings, which were published in the Journal of the Franklin Institute, in the September number for that year. His plan was, no doubt, defective in many of its details, while its principles are manifestly correct, and susceptible of advantageous application, under a variety of circumstances." . . . "Late in the summer of 1827, Col. Long was assigned to duty on the Baltimore and Ohio Railroad, and continued in this service till the end of 1829. At the commencement of this great work, the only railroads undertaken in the United States, were the Mauch Chunk, the Carbon-dale, and the Quincy Railroads, together with a few others of less extent—all designed exclusively for mining purposes. The Baltimore and Ohio Railroad was to be a commercial road, for the conveyance of freights and passengers. Its length was expected to be about 300 miles, and in this distance, it must traverse the entire range of the Alleghany Mountains, crossing a main summit elevated more than 2,000 feet above tide, besides numerous other summits of less elevation. Col. Long was looked to as the leading counsellor in all matters pertaining to the location and construction of the road, and devoted his attention with unremitting assiduity to the work." . . . "In the absence of any well digested system of operations in prosecuting works of this sort, either in the United States or elsewhere, he attempted a collation of the various rules, previously found applicable and useful in the location and construction of railroads, and of the results produced from their adoption. Finding these rules inadequate and in many respects defective, he was induced to investigate their relevancy, and make such alterations, amendments, additions, &c., as were deemed advisable and proper." . . . "The method of tracing curves by means of tangents and offsets, which was the method previously resorted to, in geodetic operations, was obviously attended by unavoidable delays, and was objectionable on many other accounts. Col. Long was inclined to the belief, that a method depending on the relations of chords and tangents would prove far more convenient and expeditious. By the former method, the determination of every point or station in the curve, must depend on two sets of observations involving the courses and distances, first from the point of observation to the origin of the offset; and second, from this point to the point sought for in the curve; whereas by Col. Long's method, the course and distance of a single chord line only is required, while the points or stations at both extremities at this line, and all other points determined in prolonging the surveyed route, will be points in the guide or water line of the curved road, and the lines between the points or stations, will be chords of the curve." . . . "In order to facilitate the application and use of this new method, he adopted 100 feet as the uniform length of his primary chords, or the distance

between the respective stations on the line of a curve, the angles of deflection at the extremities of which should indicate the relation of every chord, either to a continuous curvature, or to a tangential or right line. For example, when the angles of deflection at both ends of a chord are equal to each other, the deflections indicate a continuous curvature of uniform radius at both extremities;—when the angle of deflection at one end of the chord, is double of that at the other end, the deflection of the former indicates a continuous curvature at that extremity, and a connection with a right or tangent at the other extremity; and when the deflection at one extremity is greater or less than half the deflection at the other extremity, the curvature will be continuous at both extremities, but will correspond to radii of unequal length."

"In further illustration of the method, he devised and constructed numerous tables computed for 100 feet chords, and relating to curvatures more or less abrupt; and embracing a series of deflections varying from 15 minutes to 15 degrees. In connection with the tables, rules for computing the same were also prepared; the whole of which, together with a great variety of explanations and instructions relating to preliminary surveys, selection of routes, definitive location of railroads, formation of road-bed, construction of bridges, application of railing, &c., &c., were collated and published under his direction, early in 1829, in a small volume, entitled, "THE RAILROAD MANUAL," which is the first treatise on railroads ever prepared and published in the United States." . . . "In fine, the method consists in the application of the simple and well known geometrical corollary, that in passing from one of a series of equal chords inscribed in a circle to another contiguous chord of the same series, the angle of deflection made in the transit will be precisely double of that required in passing from either chord of the same series, on a tangent or right line. The application of this principle in the prosecution of railroad surveys, and not the discovery of the principle itself was undoubtedly originated and first adopted by Col. Long. At any rate, we have no account of any previous knowledge or use of such application in any treatise relating to the surveys of railroads or other works." . . . "The simplicity and obvious propriety of the method, as explained and applied by him, have tempted many civil engineers very uncivilly to appropriate the method as exclusively their own, cloaking their plagiarism under a variety of travesties and new versions of the rudiments and deductions put forth in "Long's Railroad Manual," without a single recognition of the application previously made by Col. Long.—The expressions "three degree curve—four degree curve—ten degree curve," &c., &c., are in the mouths of all railroad engineers, from the adept to the mere tyro without recognizing, and in many cases even without knowing that they originated and were first promulgated in "Long's Tables of Angles of deflection for chords, tangents, &c., and of the corresponding lengths of radii, versed sines, ordinates, curves," &c. "In consideration of his early attention and earnest devotion to the subject and cause of railroads in this country, and of the incalculable benefits resulting from his labors and discoveries, in aid of their successful introduction

and general use, Col. Long is fairly entitled to distinction, not only as the pioneer, but as the patriarch of railroad science in the United States."

"The Tables, &c., contained in "the Railroad Manual," were for the most part originally prepared in 1828, and furnished in manuscript to the assistant engineers, in charge of the field parties employed on the surveys of the Baltimore and Ohio Railroad. The trouble of supplying the requisite number of copies, in this way, induced the publication of the Tables, &c., in a compendious form, and they were accordingly printed in the year following under the title above mentioned."

The useful and important discoveries treated of in the foregoing extract, from which it appears that Col. Long has derived very little personal consideration, and no pecuniary benefit, have been disseminated in every country into which railroads have been introduced, and have almost everywhere superseded the methods of survey and demarcation previously in use. These, however, are not the only contributions made by him towards the successful prosecution of railway enterprises. In 1829, he devised and constructed a brace-bridge adapted to the exigencies of railroads. This structure involved the triple principle of *bracing, counter-bracing and trussing*, not merely in combination with the truss-frames generally, but with every panel of each truss-frame. The firmness, stability and inflexibility indispensable in railway viaducts and desirable in other bridges, are effectually obtained by the introduction of this combined principle, which, without doubt, was originally devised by Col. Long in the year above mentioned.

In the use and application of this important principle, the main and counter-braces serve as *struts*, and the posts as *ties*, while the trussing is effected by means of *counter-wedges, keys, or screws*, acting in connection with the posts or ties, and serving not only to stiffen the bridge, but to regulate its cumber.

The structures denominated "Howe's Bridges" patented in 1840, and now extensively used both for railroads and common roads in the United States and in foreign countries, depend on the use of this principle for their firmness and inflexibility; and by unquestionable right should be denominated Long's Bridges.

The same is true also, with respect to numerous other patentees of bridges, who have in like manner appropriated the same principle concealed under a variety of modifications, some of which are valuable, while others are quite worthless. While the credit of the modifications is fairly due to those who devised them, the structures to which they have been applied, are nevertheless Long's Bridges.

In 1839, Col. Long devised and patented a bridge structure, embracing the same combined principle, with this specific and essential difference, viz. that the *main and counter-braces* serve as *ties* and the *posts* as *struts*, in a manner completely the reverse of the actions ascribed to the same parts in the brace bridge. It is moreover obvious from the character of the two structures, that the connections and fastenings among the parts of the one are materially different from those of the other.

The new structure which, from the action of its

braces, has been distinguished by the name of Long's Suspension Bridge, is, no doubt, preferable to the Brace Bridge, especially in cases where spans of extraordinary length are required.

The principle of the Suspension Bridge was assumed. In 1845, Nath'l Rider obtained a patent for a structure to which he gave the name of "Rider's Iron Suspension Bridge." The specification of Mr. Rider, together with the drawings and model illustrating the same, samples of which are now in the Patent Office at Washington, involves the same triple principle and provides for a structure materially different in all its arrangements from the bridge bearing his name; while the structure adopted by him in the construction of bridges bears a strong similitude in all respects to Long's Suspension Bridge.

Other patentees of bridges, in this case, as well as in that of the brace-bridge, have infringed upon the rights of Col. Long, by appropriating the principle of his suspension bridge, and applying various modifications thereto, some of real, and others of doubtful utility. To the structure thus modified, they have given their own names, to the exclusion of that of the true inventor.

Prior to 1831, the apparatus for regulating the admission of steam into the working cylinders of the locomotive engine; and of advancing, stopping and backing the engine, consisted of a single eccentric or cam and one cam-rod to each cylinder, the eccentric being applied to the crank-axle, and so adjusted to the axle, as to admit of its revolving thereon, forward or backward as occasion might require for the purposes above-mentioned.

This mode of regulating the operations of the steam was often attended with difficulty and uncertainty, and could not always be relied upon as a safe and sure means of controlling the movements of the engine and its train. In 1831, Col. Long devised and adopted a more certain and expeditious method of accomplishing these important objects, which were attained by the introduction of two sets of cams and cam-rods, in connection with each working cylinder, the cams or eccentrics being firmly attached to the crank-axle, and the rods being so adjusted, that they were rendered susceptible of being alternately thrown *into gear and out of gear*, as occasion might require. This improvement was soon afterwards adopted, and brought into general use, both in this country and elsewhere.

The improvements above considered were devised and applied, when railroads were yet in their infancy, especially in this country. Other efforts made by Col. Long, relate more particularly to the *progress of commercial railroads in the United States*, and may hereafter be treated of, under this copious and diffusive head.

Col. Long has the honor to number among his early co-adjutors and disciples in railroad enterprises, the following distinguished and successful engineers, viz:

In 1827 to 1830, Gen'l Wm. G. M'Nell
(deceased)..... New York.
Do. Col. Walter Gwynn... Virginia.
Do. Maj. J. R. Trimble... Maryland.
Do. Cap. Joshua Barney... Baltimore.
Do. Dr. Wm. Howard, (deceased)..... Baltimore.
In 1827 to 1829, Col. J. M. Fessenden... Mass'setts.
In 1827 to 1830, Gen'l Wm. Cook..... N. Jersey.

Do. Cap. W. B. Gunion, (deceased)..... Mississipi.
In 1828 to 1830, Col. Geo. W. Whistler, (deceased)..... Russia.
Do. Jonath'n Knight, Esq. Penn'a.
In 1827 to 1832, Edward S. Cheshbrough, Esq. Boston.
In 1828 to 1830, H. J. Ranney, Esq. N. Orleans.
In 1832 to 1833, A. M. Lea, Esq. Tennessee.
In 1831 to 1832, J. N. Berryer, Esq. Michigan.
In 1834 to 1840, F. C. Arms, Esq. Georgia.
Do. L. Tilton, Esq. N. Hampshire.
In 1837 to 1840, Wm S. Whitwell, Esq. Mass'setts.
In 1837 to 1839, Gen'l A. H. Brisbane... S. Carolina.
Do. A. Herbert, Esq. Washington
In 1837 to 1840, Wm. S. Brown, Esq., (deceased)..... Georgia.
Do. Jas. F. Cooper, Esq. Georgia.
In 1838 to 1840, Allan Campbell, Esq. S. America.
In 1839 to 1840, Jas. S. Williams, Esq. Georgia.
In 1831 to 1834, Gen'l Wm. Norris.... Phila.
In 1837 to 1838, Septimus Norris, Esq. Phila.
In 1838 to 1840, Adam Denmead, Esq. Baltimore.

To the foregoing list might be added numerous other names of engineers, who have acquired their knowledge of railroad surveys and constructions, directly or indirectly, from Col. Long.

Terre Haute and Indianapolis Railroad.

The report of this company for the year ending 31st December last shows the business of the road for the last twelve months, to have been as follows:

RECEIPTS.	
From passengers.....	\$145,923 45
" freight.....	81,515 06
" mail and express.....	12,554 55
	\$239,992 96
EXPENSES.	
For Running road.....	\$15,217 62
" Repairs of Way, Bridges &c.....	18,912 22
" do. Machinery.....	15,423 91
" Wood, Oil, and Waste.....	10,080 21
" Depot expenses.....	8,532 19
" Salaries.....	10,219 17
" Sundries.....	2,284 25
	\$80,669 57
Leaves as net earnings.....	\$159,323 29
Interest on bonds and loans.....	\$40,962 67
Dividend July 1854.....	44,655 00
" Jan. 1855.....	46,205 00
Taxes.....	3,823 17
	\$135,645 84
	\$23,677 55

The road is 73 miles in length. The track and rolling stock are said to be in the best condition. No injury has been sustained by passengers or employees during the year. On the Evansville and Crawfordsville Railroad connecting Vincennes with Terre Haute, trains commenced running in November last, and the advantages resulting from this important connection are beginning to be realized. The Ohio and Mississippi Road is expected to be completed to Vincennes early the ensuing summer. The Terre Haute and Alton line is completed 50 miles West from Terre Haute, and is rapidly being extended over the prairies of Illinois. A connection with Chicago and Cairo will soon be formed by this and the Illinois Central Roads, while others will communicate with St. Louis, Evansville, &c., &c.

The amount of 7 per cent. bonds outstanding, January 1st, 1854, was.....\$600,000
Of 6 per cent..... 28,000

Aggregate.....\$628,600

Of which there have been converted into stock.

Of 7 per cent. bonds.....\$144,000
6 do..... 1,200
And paid of 6 per cent..... 27,400

-----\$172,600

Bonds outstanding 31st Dec., 1854.....\$456,000

The capital stock at same date

was.....\$738,650
Bonds converted..... 145,200
Stock sold..... 40,250

Amount of capital stock.....\$924,100

Total stock and bonds.....\$1,380,100

The entire cost of the road, including Union depot at Indianapolis at 31st December, 1854, was \$1,465,322.

The Directors, on behalf of the company, had taken stock in the Evansville and Crawfordsville Railroad Company to the extent of \$20,650; for which they gave the latter company bonds of Vigo county, and rolling stock valued at that amount.

GENERAL ACCOUNT.

Dr.	
To Construction.....	\$1,439,681 13
Union Depot and track.....	25,640 78
	-----\$1,465,321 91
Evansville and Crawfordsville Railroad Company Stock....	20,650 00
Debts from other roads.....	4,109 05
Mail transportation.....	1,825 09
Treasurer	24,524 00
	-----\$1,516,429 96
Cr.	
By Capital stock.....	\$924,100 00
7 per ct. bonds.....	456,000 00
	-----1,389,100 00
Sundry accounts.....	3,980 70
Bills payable.....	32,641 93
Dividends unpaid.....	1,119 75
Dividend, No. 5.....	46,205 00
Surplus.....	52,382 58
	-----\$1,616,429 96

The dividends paid for the last twelve months have been *ten per cent.*

The above road may be taken as an example of what Western roads *can* be built and operated for under competent management. The entire amount of sacrifices submitted to in construction, in the shape of discounts on stock and bonds, interest etc., did not in the above instance exceed \$100,000.—The cost of the road the third year of its operation reached only \$20,000 per mile. It may be taken as a standard of what Western roads, in possession of an equal amount of traffic *should* cost. The excess of cost above this standard may be taken as measuring the amount *wasted* in construction.

This road may be also adopted as a standard, showing what the average local earnings of the best Western roads traversing well settled and wealthy sections of country, and possessing favorable routes may be expected to be. The ratio of earnings upon cost of the above road for the three years since the road went into operation have been as follows:

	Gross Receipts.	Net Receipts.	Rate of Div'n'd.	Cost.
1852.....	\$105,944	\$71,446	\$7	\$1,311,672
1853.....	177,996	111,647	7½	1,414,284
1854.....	239,993	159,228	10	1,465,321

The road, from the increase of its business, will probably maintain for an indefinite period, the rate of dividend paid for 1854. A good Western road costing \$20,000 per mile in the outset can pay by prudent management 10 per cent on its cost. Where this sum is exceeded the rate of earnings must be reduced in an equal degree. We invite attention to this statement which is worth more as a guide in estimating the productiveness of railroads than any amount of theory or speculation.

The financial condition of the above road is one of entire independence; consequently it is entitled to pay cash dividends, and it is the only one in the State of Indiana that has for the half-year that has just closed.

Finances of Cincinnati.

According to the Report of the City Treasurer for the year ending 1st March, 1854, the financial condition of Cincinnati stood thus.

DEBTS DUE THE CITY.

From the Little Miami Company, 100 Bonds at \$1,000 each, payable 31st December, 1880.....	\$100,000 00
From Cincinnati and Whitewater Canal Company, \$2,000 in City Orders and \$33,000 in Bonds.....	35,000 00
From amounts due on assessments for opening streets, paving, &c.....	79,975 26
From Hillsborough and Cincinnati Railroad Company for Bonds loaned said company.....	100,000 00
From Eaton and Hamilton Railroad Company for Bonds loaned said company.....	150,000 00
From Covington and Lexington Railroad Company for Bonds loaned said company.....	100,000 00
From Ohio and Mississippi Railroad Company for Bonds loaned said company.....	600,000 00
From Debts transferred from Cash account, and uncurrent money.....	2,998 90
	-----\$1,167,974 16

DEBTS OWING BY THE CITY.

Loan from U. S. Bank, at 5 per cent. payable Oct. 1st, 1871.....	\$100,000 00
Loan from H. Tolland, Philadelphia, at 5 per cent. payable Nov. 1st, 1885.....	80,000 00
Bonds issued to Little Miami Railroad Company, payable May 1st, 1860.....	\$60,000 00
Bonds issued to Little Miami Railroad Company, payable May 1st, 1865.....	20,000 00
	-----80,000 00
Loan to Little Miami Railroad Company, payable Dec. 31st, 1880.....	100,000 00
Bonds issued to Cincinnati and Whitewater Canal Company, payable May 1st, 1865.....	400,000 00
Bonds issued to the Cincinnati Water Works Company, payable June 15th, 1865.....	300,000 00
Bonds issued to the Cincinnati Water Works Company, payable April 15th, 1895.....	500,000 00
Bonds issued for funding City Debt, payable May 1st, 1897.....	150,000 00
Bonds issued to Cincinnati and Whitewater Canal Company, payable May 1st, 1897.....	30,000 00
Loan from Henry Tolland, at 5 per cent. payable Nov. 1st, 1885.....	40,000 00

Bonds issued to Lafayette Bank for School Loan, payable in 1865.....	5,000 00
Bonds issued for School purposes, payable May 1st, 1885.....	25,000 00
Bonds issued for School purposes, payable April 1st, 1870.....	60,000 00
Bonds issued for Hillsborough and Cincinnati Railroad Company, payable April 1st, 1880.....	100,000 00
Bonds issued for Hamilton and Eaton Railroad Company, payable Jan'y 1st, 1881.....	150,000 00
Bonds issued for Covington and Lexington Railroad Company, payable Jan'y 1st, 1881.....	100,000 00
Bonds issued for Ohio and Mississippi Railroad Company, payable Jan'y 1st, 1882.....	600,000 00
Bonds issued for Cincinnati Water Works Company, payable June 15, 1900.....	75,000 00
Bonds issued for Funding City Debt, payable Jan'y 1st, 1900.....	34,000 00
	-----\$2,929,000 00

The whole of these, except where the rate is mentioned, bear 6 per cent. interest. The payment of interest on the following Bonds is guaranteed by the parties to whom the loans were made, viz:

Loan to Little Miami Company.....	\$100,000 00
Bonds issued to the Water Works Company.....	875,000 00
Bonds issued and loaned to Whitewater Canal Company.....	375,000 00
Loaned Eaton and Hamilton Railroad Company.....	150,000 00
Loaned Hillsborough and Cincinnati Railroad Company.....	100,000 00
Loaned Covington and Lexington R. Road Company.....	100,000 00
Bonds Loaned Ohio and Mississippi Railroad Company.....	600,000 00
	-----\$1,960,000 00

The following is a statement of the property owned by the city:

Market Houses and Public Buildings, valued at.....	\$1,500,000
School Property.....	359,303
Fire Department Property.....	247,613
City Property, Miscellaneous.....	638,630
City Water Works.....	1,000,000
Whitewater Canal Stock.....	400,000
Debts due the City.....	1,167,978
	-----\$5,313,524

The receipts of the previous year, from all sources, including \$108,879 balance from 1853, amounted to \$566,941; and the expenses for the same period were \$475,843.

New York and Harlem Railroad.

The report of this company which has just been published, shows the receipts for the last year to have been—

From Passengers.....	\$520,680 00
" Freight.....	329,976 86
" Mails and Miscellaneous.....	84,403 16
	-----\$935,060 02

And the expenses for the same period to have been—

For Maintenance of Way.....	\$175,354 06
Do. of Machinery.....	80,781 64
Fuel, Oil, and Waste.....	150,363 51
Office and Depot Expenses.....	117,134 92
Salaries of Conductors, Engineers &c.....	89,515 66
Sundries, as Loss, Damages, Insurance, Rents, Horses, &c.,	174,390 77
	-----\$787,540 59

To which add—	
Interest, Premiums and Discount....	\$194,319 95
Dividends for the year on Preferred and Old Stock.....	192,841 00
	\$1,174,701 51
Showing an excess of expenditures over receipts amounting to.....	\$239,640 49
From which deducting items suppressed in last report by Mr. R. Schuyler.....	57,856 38

Leaves the actual deficiency for the year.....\$181,784 11
Which has gone to swell the floating debt.

The following statement shows the general condition of the company at date of report.

Old Stock, including the fraudulent issue of \$209,000.....	\$4,216,050 00
Preferred Stock.....	1,500,000 00
Funded debt.....	2,714,201 48
Floating do.....	813,393 54

<i>Cost of Road and Equipment.</i>	
Road, including grading, bridging, iron buildings, &c.....	\$5,508,989 83
Locomotives, horses &c.....	360,618 19
Passenger, baggage, and other cars.....	399,280 67
Albany extension certificates withdrawn.....	1,858,500 00
	\$8,127,388 69

Difference.....	\$1,116,256 33
Accounted for by the above fraudulent issue of.....	\$209,000 00
Iron on hand.....	207,839 09
Interest, discounts, commissions, &c., to date.....	1,313,513 18
	\$1,730,352 27

Excess.....	\$614,095 94
<i>Items yet to be Charged to Capital.</i>	
Balance Albany certificates outstanding, to be retired by further issue of old stock.....	\$391,500 00
Amount required to complete the road.....	\$135,104 78
	\$526,604 78

which added to the above makes the entire capital \$9,770,249 80, to close the construction account. It is supposed that \$10,000,000 will, at all events, be amply sufficient for that purpose.

Source from which to fund the floating debt, and close construction account.

First mortgage bonds unappropriated and available.....	\$ 388,000 00
Second mortgage bonds.....	1,000,000 00
	\$1,388,000 00
Less for discount on first mortgage bonds 20 per cent.....	\$77,600 00
Less for discount on second mortgage bonds, 25 per cent.....	250,000 00
	327,600 00

Floating debt as before.....	\$813,393 54
Required to complete the road, see Engineer's estimate annexed.....	135,104 78
	948,498 32

Leaving a surplus of.....\$111,901 68

Under the head of "Cost and Equipment" is the sum of \$207,839 09 the price of iron purchased through Mr. Schuyler, who in paying for it, used the bonds of the company to be given in payment for his private purposes; and gave the company's notes instead, without their knowledge. After being warehoused, this was seized by the sellers on failure of the Schuyler firm. No settlement of this claim has yet been made, nor is it known how it will terminate.

On the future prospects of the road, it is stated that a very considerable increase of receipts with diminished expenses has taken place within the last six months. A new arrangement has been made with the New Haven Railroad Company securing higher rates for the use of that portion of the road below the junction; but as these rates are still considered too low to be remunerative, a notice was served on that company that the present arrangement would terminate in October next. The same result has been come to and a similar course taken with regard to the Third Avenue Railroad Company for the use of the Harlem railroad in the Bowery. At the 1st of January last, a rise in the rates of fare over the whole line was adopted.

A revision of the commutation fares is urged; as the present rates do nothing like pay expenses.

The opening of the Hartford, Providence and Fishkill Railroad is expected to add somewhat to the receipts of the road.

The following is the estimated business for 1855. It is considered that the calculation is perfectly safe, and that the results will rather exceed than fall below the figures given.

Estimated receipts from Oct. 1st, to Sept. 30th. 1855.....	\$1,200,000
From October 1st, 1855 to Jan'y 1st, 1856, 3 months.....	300,000
	\$1,500,000
Deduct transportation expenses 65 per cent.....	975,000
	\$525,000

All the first mortgage bonds of \$3,000,000 not being issued for the half year's interest due 1st May next is estimated.....	\$100,000 00
Eight month's interest on \$3,000,000, all being out to 1st Jan. 1856.....	140,000 00
Half year's interest on \$1,000,000 second mortgage bonds to be issued.....	35,000 00
Interest on Albany Extension Bonds, not redeemed estimated at.....	12,000 00
To retire fraudulent issue by Alex. Kyle of Preferred Stock.....	50,000 00
	\$347,000
Eight per cent. dividend on Preferred Stock \$1,500,000, 1st July and 1st Jan'y.....	120,000
Surplus.....	\$58,000

It is recommended that a law be passed by the present Legislature reducing the nominal value of the old stock forty per cent; every share thus representing thirty instead of fifty dollars, which would reduce the capital stock from \$4,500,000 to \$2,700,000 and make it a reliable 7 per cent stock, and accordingly worth par in the market.

A considerable portion of the report is taken up with the discussion of the frauds perpetrated on the company by Schuyler and Kyle; the general conclusion arrived at, being that the stockholders suffered by "the act of God"; i. e. that the negligence of their own Board of Directors was no way blameable in the matter.

Journal of Railroad Law. GOODS BURNED.

This was an action brought against a Canal Company, but the principles involved are applicable to Railroad Companies.

The Canal Company were common carriers.—Mr. Garside delivered to them four "pockets" of hops, which they agreed to convey from Storport to Manchester, and from thence to forward them to Stockport. The goods arrived safely at Manchester and were put into the company's warehouse to be stored till a carrier came from Stockport. The same night their storehouse was burned down together with the hops. Mr. Garside then sued the company for damages for the loss of his hops.

It was decided that the keeping of the goods in the warehouse, in such a case, is not for the convenience of the carrier, but of the owner of the goods. It is for the interest of the carrier to get rid of them directly; and it was only because there was no person ready at Manchester to receive these goods, that the defendants were obliged to keep them. Therefore Mr. Garside must bear the loss. (Garside vs. the Proprietors of the Trent and Mersey Navigation Company, *English Railway and Canal Cases*, 508.)

PURCHASE OF STOCK.

Mr. Hamilton directed his broker Reid to purchase for him two hundred shares of the stock of the Grand Junction Railway Company, which was then about to be created. The broker engaged the stock. Subsequently Mr. Hamilton learned that he had been induced to direct the purchase by misrepresentations. He accordingly wrote to his broker, mentioned the information which he had received, and concluding in these words.

"I give you this notice that I shall consider all the contracts which you have made for me null and void, should the information above mentioned prove correct."

Reid communicated this notice to the brokers from whom he had engaged the stock but they refused to rescind the contract.

When the stock was issued, notice was given to Mr. Hamilton, that 200 shares were ready to be assigned to him, but he refused to receive them.

About two months afterwards, a good deal of negotiation having taken place, in the meantime, the shares were formally tendered to defendant, who refused them. Then Barned, who was the proprietor of them, sold them. Meantime the stock had somewhat fallen, so that the 200 shares brought about a thousand pounds less than they would have brought had it been sold when Hamilton's letter to his broker was written.

The principal question was whether Hamilton's letter was distinct enough to amount to a refusal to take the stock. If it did, then Barned was bound to sell the stock immediately, and the subsequent depreciation must fall upon him. But if

not, he was right in holding it until the final tender and refusal; and Hamilton must make good the loss.

It was decided that a person who requires to repudiate a contract for the purchase of stock must do so in more distinct terms than those of Mr. Hamilton's letter. He was bound, the court held, to pay for the loss upon the stock. To say that he should consider the contract null, if his information proved correct, amounted to nothing; for it left him at liberty afterwards to turn round and say that he was satisfied that his information was not correct, and demand the stock.

(Barnes vs. Hamilton 2 Ibid 456).

In the 17th volume of Barbour's Supreme Court Reports, just issued from the press, we find the following decisions:

FREIGHT, WHEN DUE WITHOUT DELIVERY OF GOODS CARRIED.

It is a general rule that the contract of a common carrier for the conveyance of goods must be completely performed by the delivery of the goods at the place of destination, before freight can be demanded, yet where a carrier upon his arrival at the place of delivery, reported himself ready to deliver his cargo, but the consignee was not ready to receive it, and the carrier's vessel after waiting several days for the opportunity to discharge her cargo, was, while thus waiting, carried away by a freshet and capsized, and her cargo lost overboard so that it could not be delivered to the consignee. *Held* that freight was nevertheless recoverable.—Wright, Justice, however dissented from the decision. *Clandaniel vs. Jackerman*.

In such a case the carrier having tendered a delivery of the goods, and being obliged, against his will, and without any fault on his part to retain the possession, his contract as a carrier is performed, and he holds the goods as a mere depository and liable only for negligence. *Ib.*

A carrier having arrived with the goods at the place of destination, and offered to deliver them, the owner or consignee is bound to receive them within a reasonable time. And if he neglects to do so, the carrier may, if practicable, leave the goods in store and thus discharge himself from all further liability. *Ib.*

ACTIONS FOR CALLS UPON STOCK.

An action for calls will be against a subscriber to the capital stock of a Railroad corporation, or an express promise to pay for it, although the corporation also has the power to declare his stock forfeited for non-payment. *Troy and Rutland Railroad agt. Kerr*.

It seems one cannot become a member of a Railroad Company, under the act of 1850, without payment of ten per cent. on his subscription, otherwise under the law of 1848. *Ib.*

Where there is no fraud, one who signs the articles of association to organize a railroad corporation cannot in an action for the calls show that the road is longer than the distance stated in the articles. *Ib.*

RAILROAD LEASES.

A lease by a Railroad Corporation of a part of its road and franchises during the continuance of its charter, and a transfer of the remainder also for the same time does not, of itself, dissolve the corporation. *Ib.*

It seems that one Railroad Corporation cannot

lease its road or give up the management of its line to another, nor delegate its powers without the authority of the Legislature. *Ib.*

But such lease would not discharge a subscriber to the stock from his liability to pay calls on his subscription. *Ib.*

K. subscribed to the capital stock of a Railroad Company which was organized in 1849, with a capital stock of \$1,500,000. In 1851, the articles of association were amended under the general law of that year relative to railroads, and the capital stock reduced to \$225,000, and the Northern terminus of the road was changed so as to shorten it nearly one-half of the distance mentioned in the original articles. The company also transferred a part of the remainder of the road and leased the rest to another corporation, during the continuance of its charter. In the Fall of 1851, he on being called upon for the payment of calls upon his stock, refused to pay. In an action by the company for the amount of the calls, *Held* (Hand, Justice not assenting) that the plaintiffs were entitled to recover. *Ib.*

THE EFFECT OF DIRECTORS ILLEGALLY PARTICIPATING IN THE CONTRACTS OF THEIR COMPANIES.

A contract which is expressly within the prohibition of a statute is void, although the statute is only prohibitory in its terms, and does not declare in so many words that all contracts therein forbidden shall be void. *Barton vs. the Port Jackson and U. Falls Plank Road Company*.

Accordingly held that under the provisions of the statute prohibiting Directors of Plank Road Companies from being concerned in any contract for making or working the road, or any part thereof, a contract between a plank road company and two of its directors, for the construction by the latter of a portion of the road, was absolutely void. *Ib.*

Neither the directors nor stockholders of a Plank Road Company can waive the provisions of a statute forbidding the directors from participating in the benefits for building the road. *Ib.*

Nor where a contract grows out of, or is connected with an illegal act, will the court enforce it. And if it be in fact connected with an illegal transaction it is transmitted with the illegality from which it sprung. And where there are two considerations for a contract, if either of them be illegal, the agreement is void. *Ib.*

A PLANK ROAD COMPANY PURCHASING ITS OWN STOCK.

Such an agreement is void, as against public policy. Directors cannot do this, and mortgage the road rendering stockholders responsible. *Ib.*

RAILROADS IN THE CITY OF NEW YORK.

The corporation of the city of New York has the exclusive right to control and regulate the use of streets in the city. In this respect it is endowed with Legislative sovereignty. And the exercise of that sovereignty has no limits, so long as it is within the objects and trusts for which the power is conferred. *Milhan and others vs Sharp and others*.

An ordinance regulating a street is a Legislative act, entirely beyond the control of the judicial power of the State. But a resolution declaring that certain individuals designated as the associates of the Broadway Railroad shall upon certain conditions and stipulations therein specified,

have the authority and consent of the Common Council to lay a double track for a railway in Broadway, and conferring exclusive privileges, designed to be perpetual, is not a Legislative act, regulating the use of the streets, but it is a grant of the use itself, to the extent specified.

Such a resolution is void as not being within the powers of the Common Council.

It is a surrender of Municipal authority, which it seems cannot be made without Legislative authority.

Where the Legislature has declared that a Municipal corporation shall be empowered to regulate fares, such corporation cannot authorize a Railroad Company to charge a specified sum.—foreman.

Ohio and Mississippi Railroad.—Break of Gauge.

The inconvenience arising from the adoption of the six feet gauge by this road is daily manifesting itself with increased force. We have already noticed its effects upon the earnings of its eastern division, in driving away business to other lines, and to the Ohio River. Recently a portion of its western division has been completed, so as to form, in connection with the Illinois Central a continuous line of railway from St. Louis to Cairo. A large winter business was expected from this connection, especially by the Central road,—expectations which have not been realized in consequence of the different gauge of the two roads. The breaking of bulk at the junction increases the cost of transportation so much, that the river still retains the business. Another drawback is the poverty of the Ohio and Mississippi Company which prevents them from suitably equipping their road; and as the cars of the Central cannot run upon it, the latter company can render no effectual assistance. The most valuable part of a whole season will thus be lost to both roads by the senseless fallacy of the Ohio and Mississippi Company.

It is high time that the blunder should be corrected. A better occasion never offered. Upon the Illinois division, the company have only a small amount of rolling stock, and they could make the change at an expense not exceeding \$50,000. Should they determine to make it, we have no doubt that the Illinois Central Company would bear a part of the loss. On the eastern division, the cost of change might be somewhat greater, but this cost would bear no proportion to the advantages to be gained. There are numerous roads to which the equipment owned by the company could be sold; while the connecting lines will be glad to furnish, for the present, sufficient to run the road.

Unless the change proposed is adopted, we do not see how the Ohio and Mississippi Company is to get money to complete their road, unless perhaps it can be obtained in Cincinnati and St. Louis. The road, if completed with the wide gauge, would not be worth so much as with a narrow one, by millions. We do not believe that sagacious men will trust any more money to a company which have given such overwhelming evidence of their incompetency—a company that have violated the very first principles in railway economy. The mistake, if persisted in, is a fatal one, and should be corrected without the least delay.

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American Railroad Journal.

Saturday, February 10, 1855.

History of the Philadelphia and Reading Railroad.

The charter authorizing the construction of this work was approved 4th April, 1833, and empowered parties named to open books of subscription for the construction of a railroad from the city of Philadelphia to the borough of Reading. The number of shares was fixed at 20,000 of fifty dollars each—to be increased to double that number if the shareholders should see fit. Operations were required to be commenced within two years, and the whole line to be completed within seven years from date of charter. By an amendment passed March 31st, 1837, the Little Schuylkill Navigation Railroad and Coal Company were permitted to transfer their rights and improvements to the Reading Company, the latter increasing their capital stock to the amount necessary for that purpose, and paying into the State Treasury every year a tax of eight per cent. on the whole amounts of the dividends declared by them.

In the original organization of this company, it was contemplated to build the road as far as Reading only; two other companies being then engaged in extending it from that place to the coal regions. After considerable progress had been made, it was ascertained that the other companies could not go on with their works, and that this corporation must either lose the benefit of its enterprise, or assume the construction of the whole line to Pottsville. Application was made to the Legislature for permission to do so which was obtained, and the time for furnishing the entire work extended to March 20th, 1842.

That part of the road between Reading and Norristown was opened on the 16th July, 1838, and at date of report in the following September, had cost \$2,376,307. On the 5th December, 1839, the road was opened between Philadelphia and Reading, at which time the cost of the work had amounted to \$4,540,971. The entire line through to Mount Carbon, was opened for the transportation of passengers and freight, on the 13th Jan'y, 1842.

The road follows the course of the Schuylkill, from Pottsville to Philadelphia, with a descending or level grade, till it strikes the grounds between the Schuylkill and Delaware rivers. From Pottsville to Mt. Carbon, it traverses occasionally either side of the river. At the latter place, it crosses to the south side, and passes by a tunnel

through the Blue Mountains. Above Reading it re-crosses the river and continues along the north side to nearly opposite Phoenixville where it again crosses and passes through the mountain by a tunnel. The remainder of its course in which a third tunnel had to be made, is along the south side of the stream. At the Falls of the Schuylkill, above Philadelphia it divides, and one branch enters and passes through the city, the other continues to the north and reaches the Delaware at Richmond. The entire length, including the city branch, is 96 miles.

In grade and directness, the road has every advantage in its favor; having a level or descending grade from Pottsville to tide water, with the exception of a short distance between the Schuylkill and Delaware. The general course of the mountain ridges being directly across the route, the frequent tunnels necessary to pass them, and the bridges required for crossing the river, were among the physical obstacles to the progress of the work.

The early estimated receipts of the road, were as follows:

400,000 tons of coal at \$2 25	\$900,000
Other freight, 100,000 do. half way at \$2 00	200,000
Passengers 100 each way daily or 73,000 at \$4 each	292,000
Mails, wharf-rents, &c.	48,000
	\$1,440,000

The current expenditure for all purposes was estimated at \$435,545, leaving a net revenue of over one million, or twenty per cent. on a capital of \$5,000,000.

On the 17th day of May, 1842. the Richmond branch, for the accommodation of the coal trade on the Delaware, was opened. In the following August, the bridge across the Schuylkill at the Falls was destroyed. The delay incurred with the deficiency of rolling stock, caused a considerable loss to the company for the season. The gross earnings this year were about \$200,000; and the expenses, as near as could be ascertained, \$118,000. The general account of the road and equipment valued at \$5,886,633 stood thus—

Stock, 40,200 shares	\$2,010,000
6 per cent. loans inconvertible payable 1843, 1845 and 1847	\$152,450
6 per cent. loans convertible payable 1850	706,000
6 per cent. loans convertible sterling payable 1850	847,200
5 per cent. loans convertible sterling payable 1860	940,800
	\$2,646,450
Notes and Drafts Payable	442,447 74
Other debts	767,735 65
	\$5,866,633 39

Of the bonds \$65,250 fell due in 1843. To provide for the liquidation of these with a portion of the floating debt, and meet other claims incurred for construction, a mortgage was executed of 600,000 dollar bonds and £225,000 of sterling bonds—both convertible, bearing interest at 6 per cent. and falling due in 1860. In the same year, a temporary mortgage was executed to cover the amount of \$212,635 falling due in 1845 for rolling stock. The passenger fares were reduced from \$4.00 to \$2.50 and \$2.00, with a decrease of receipts amounting to 23 per cent. The second track was commenced, and ten miles completed;

the northern tier of wharves at Richmond were made ready for the shipment of coal; new shops were erected at Pottstown for the construction and repair of rolling stock; and a large engine house at Schuylkill finished. The track and rails also underwent great and important alterations, and large additions were made to the rolling stock and machinery of the road.

In the report of the year 1844, in answer to the inquiry when the increase of debt is to terminate, it is stated "that the cost of the entire work and machinery will not, in any event, exceed \$10,000,000; and when it shall become advisable to increase the expenditure to this amount, its capacity for business will be almost unlimited."

During this year, the second track was completed to the Delaware, and laid with T rail of 60 lbs. to the yard; new piers and basins were constructed at Richmond; side-tracks were laid, and station-houses built, at several places along the line; new connections were made with different parts of the mineral districts; and several new stone bridges erected, replacing old or decayed structures.

In 1845, in order to induce the holders of stocks and bonds to make an effort for the relieving of the company from the embarrassment of a large floating debt, a special report was drawn up by Messrs. John Davis, Robert Schuyler, Amos Binney and W. Raymond Lee, presenting an accurate and detailed statement of its financial condition and resources. The investigation extended to the 31st of July of that year, and in the meantime that object was accomplished by the funding of the floating debt to the amount of \$1,100,000, and the increase of the stock to the same amount. The substance of this report is as follows:

To the query, "whether all sums of money received during the year ending 30th November, 1844, have been satisfactorily accounted for, the committee reply," that after proper examination vouchers had been produced fully accounting for it, and showing the various purposes to which it had been applied. In the classification of expenditures—in regard to which a difference of opinion may fairly exist,—they found some few items not over \$15,000 in all, which they considered should have been charged to different accounts, but which no ways affected the integrity of the company.

The cost of transporting a ton of coal, including the proportion of all expenses properly chargeable upon coal, was found to be 47 79-100 cents per ton. To the query, "whether any bonds had been negotiated on which the discount and loss suffered ought to have been, and was not charged," it is answered that a considerable amount of bonds had been negotiated, the discount or loss of which was not charged at the time of their issue; but the circumstances under which this occurred seem to present a satisfactory reason for the omission. This was not charged at the time, as some parties feared it was of an usurious character, and hence the bonds were declined to be received, unless a law should be passed by the Legislature legalizing this on the part of the company, which was subsequently done. No new issue of bonds was made during the year, except one meeting a loan of \$444,000 made in 1839.—On the 1st of August preceeding, bonds had been paid and negotiated, including commission and

charges, to the amount of \$68,800 00, leaving outstanding at that date, \$6,619,200. The total commissions and losses of all kinds upon these then amounted to \$1,494,046 89. The bonds outstanding as collateral security, were \$1,444,000; the debts for which they were pledged making part of the liabilities of the company stated elsewhere, and amounting to about 50 per cent. on the whole securities given.

The average loss from *dumpage* per ton for the previous nine months had been 4 12-100 cents per ton, and the total loss for the year, \$21,724.76. No bonuses had been paid to boatmen to induce them to run from Richmond. As to the condition of the road, they state that the only ascending grade on the coal road is between Schuylkill and Delaware, where it is 40 feet to the mile; the coal trains are aided by an additional heavy engine. The road connects upon the banks of the Delaware with 13 commodious wharves with ample docks between, and the utmost conveniences for loading numerous vessels. Where the road enters the coal region, branches which are the property of others, diverge from it, and connect with the principal points where the mining operations are carried on. The road-bed throughout is said to be well formed, and the track superior to those generally in the Middle States.

With regard to the condition of the machinery on the road, they remark that they were struck with the order, harmony, and efficiency of the arrangement, and with the regularity and ease with which results of such magnitude were accomplished. The shops, wharves, water-stations, &c., were in good order and commodious.

The liabilities of the company, as exhibited by their report at 31st July, were as follows:

Capital Stock 40,400.....	\$2,020,000 00
Bonds.....	6,619,200 00
Notes and Drafts payable.....	809,341 56
Accounts payable.....	729,450 40
Mortgages.....	124,950 00
Coal Certificates.....	15,340 50
Balance, to credit of Transportation account.....	285,709 69

Total.....\$10,603,990 15

In addition to which were various amounts of unliquidated and contingent claims for works in progress both in the construction and transportation departments, from which deducting the stock and cash assets on hand, showed the total liabilities of the company to amount to \$8,596,705 21. The increase in these for the last eight months had been \$860,714. On a review of the condition of affairs and prospects of the company, the committee came to the conclusion that the stock and bondholders had it in their power to improve the character of their own property, and restore the credit of the company, by their coming forward and funding the floating debt, and thus provide funds adequate to equip their road for the annual transportation, say 1,500,000 tons of coal.

In the annual report of the company made January, 1846, it is stated that, in accordance with the above recommendation, negotiations had been made for an issue of stock at par to the extent of \$1,000,000; besides \$250,000 in mortgage bonds, and \$150,000 of other obligations, making in all \$1,500,000; that the liabilities of the company, exclusive of stock were \$8,318,530 91 from which deducting the funded debt, \$6,823,878 98, left a floating debt of \$1,494,651 93 which was provided

for by the negotiations just completed. The gross receipts had exceeded \$1,000,000, and the net revenue for the past year amounted to \$507,305, or \$94,481 after paying interest on their indebtedness. The Managers had felt the necessity of increasing their rolling stock; and had contracted for 17 new locomotives and 1000 coal-cars. The machinery would then be adequate to the delivery of 1,250,000 tons of coal annually, which amount they state their ability at once to contract for.—Important additions had been made to their works in improving the wharves, making new track, sidings, bridges, water-stations, &c.; besides a large increase to the machinery.

The year 1846 was the most propitious the company had yet enjoyed. The gross receipts reached \$1,900,115; and the net revenue, \$1,037,795, leaving \$402,292 applicable to dividend fund, or upwards of 12½ per cent. on the capital stock. This was applied towards the payment of the machinery which had been delivered during the year, and a dividend of 10 per cent. in stock agreed to.

The general account of the road, at the date of this report, stood thus,—

Stock.....	\$3,120,000 00
Bonds.....	7,144,000 00
Other obligations.....	1,298,087 05
Less debts due the company.....	298,018 03
Balance, subject to Dividend Fund.....	923,069 02
	402,627 65
	\$11,589,696 67

This was increased in 1847 to \$11,862,409 54, an issue of \$1,400,000 bonds having been made to reduce the floating debt, that had since been contracted, and meet the payment of bonds falling due. The quantity of coal carried over the road during the year was 1,350,151 tons. To accommodate this increased business, some purchases of land were made at Richmond wharf, and stock was subscribed by the Managers to the Telegraph Company. The gross receipts for the year were \$2,002,945, and the net revenue \$902,539; leaving applicable to dividend \$434,150. A stock dividend was recommended by the Board; and one of 12 per cent. declared. The total expenditure for construction account during the year, amounted to \$222,931.

The financial difficulties of the year 1848 fell with peculiar severity upon the coal and iron interests in Pennsylvania. Many of her Mills, Furnaces and Mines had to be closed. The consumption of coal became lessened, and the price sunk to an unprecedented low figure. Many of those engaged in the trade became unable to meet in cash the demands for freight, and the company were obliged to receive their obligations instead of cash payments. In the meantime, many of the company's obligations were maturing. In this difficulty, a large number of bonds which had been pledged as collateral security, had to be sold to meet the engagements; as provision could be made from no other source, without suspending operations altogether. In consequence was a large increase to the liabilities of the company.

During this year, an act was passed by the Legislature sanctioning, with the assent of the Stockholders, the conversion of all debts payable

prior to 1857 into a *Preferred Stock*. This assent was obtained, and agreements were entered into by the holders of such bonds to the amount of \$8,703,000. Of these \$1,648,000 had been converted, at date of report; and it was expected that the balance in like manner would be surrendered and disposed of.

The general account, at the end of 1848, stood thus,—

Stock.....	\$3,945,892 50
" Preferred.....	1,648,000 00
	\$5,593,892 50
Loans, of all kinds.....	7,169,250 00
Other accounts, net.....	1,633,816 00

Total.....\$14,396,458 50

The business of the road for the same year was as follows:

No. of tons of coal carried.....	1,235,044
Gross Earnings.....	\$1,692,555 52
Transportation Expenses.....	1,212,029 68

Net Profits.....\$480,525 84

At a special meeting of the stockholders in September, 1849, it was announced by the President that all of the bonds payable in 1856 which had been sold, had been converted into common and preferred stock except \$160,000. Very few, however, of those payable in 1850, amounting to over \$2,500,000 had been brought in. It was accordingly recommended by the Managers, and resolved that a Mortgage be executed amounting to \$4,000,000 at six per cent. and payable in 1870; that a sinking fund of \$75,000 per annum be created, to be annually invested in the purchase of these bonds; that an amount of common stock be created annually in lieu of the sum thus appropriated to the sinking fund equal to the par value of the securities purchased, to be called *New Stock entitled to Dividends after 1852*; that the stock thus created by the sinking fund be issued to the stockholders in January, 1853, and annually thereafter; that these bonds be issued at par in exchange for preferred stock, if desired, and in payment of the bonds due in 1850; and that, as the earning for the first six months were unusually small, a dividend of 2½ per cent. be declared on the preferred stock for that time, leaving 4½ for the remainder of the year.

At the same time, a special report of the affairs of the company was made by David A. Neal, giving an exhibit of its financial condition since 1845. After offering some suggestions as to the introduction of certain reforms, and the manner of doing so, Mr. N. says—

"In investigating the financial operations, there is certainly much to surprise and startle, in the developments that are made. The enormous sums that have been paid to sustain the credit of the company, the large amount of securities that have been suffered to accumulate in certain hands to its evident disadvantage, the control that seemed to be exercised by others than those to whom it legitimately belonged, and the erroneous impression of its situation given in the annual reports, may have been and were reprehensible; yet there was something in almost every case that could be alleged in extenuation, and sometimes perhaps they could be defended on the ground of sheer necessity."

On the 30th November, 1848, the total cost of the Railway Equipment and Real Estate was.....\$14,226,881 16

Since increased by Discount on Bonds.....

Balance Bonus on	
Loan of 1847.....	303,417 00
Interest and Land	
Damages.....	55,542 58
Coupons paid in Jan.,	
1849.....	266,877 00
Back Interest & Al-	
lowances.....	224,908 75
Discount on \$211,000	
Bonds to be sold	
at 60 cents.....	84,400 00
Unsettled claims es-	
timated and Real	
Estate.....	42,089 82
	2,153,435 15
Less sale of Engine.	1,750 00
	2,155,185 15

Total sum, June 30th, 1849... \$16,378,566 31
 Paid for by Stock... \$4,218,117 50
 Paid for by Preferred
 Stock..... 2,336,000 00

	\$6,554,117 50
Bonds due in 1850...	2,533,700
do do 1856...	160,000
do do 1860...	6,920,800
do and Mortgage.	209,900
	16,378,517 50

The assets on hand at the time, as Cash, Bills Receivable, Debts, Materials, Securities, Telegraph Stock, &c., was estimated at..... \$899,825 54
 And the floating debt, including unsettled balances, Notes Payable, Income Account, &c..... 910,175 54

Showing a balance owed by the company of..... \$10,350 00

To cover this, however, they owned Real Estate at Richmond not reckoned in cost of road, valued at over ninety thousand dollars.

The operations of 1849, as shown in the annual report for that year, show a respectable gain over 1848; the coal carried being 1,097,761 tons, and the whole receipts amounting to \$1,933,590, while the working expenses were a little less than half that sum. A dividend of $4\frac{1}{2}$ per cent., (making 7 per cent. for the year,) was paid as anticipated, on the preferred stock for the last six months; in addition to which \$100,000 were appropriated to the sinking funds, and \$74,704 to revenue fund.—The general account showed a slight decrease from that of June 30th and the President recommended that the construction account be closed, as it was not apprehended that the business of the road would require any increased accommodations beyond these then existing, which were stated to be sufficient for the transportation of 1,400,000 tons of coal per annum.

The year 1850 showed a much larger business done by the company than any former year, they having transported 1,351,502 tons, and the gross receipts having risen to \$2,363,958 50, of which the expenditure but a trifle exceeded 45 per cent. For the first time in their history, the Directors were able to declare a cash dividend (six per ct.) to the holders of common stock, besides making the usual appropriations, and meeting the State tax of five per cent. on dividends. There had been no increase to the stock. The bonded debt was reduced by the amount of \$275,900, of which \$145,083 resulted from the investing of the sinking fund of 1849, and the balance from that of 1850. The road was stated to be, at the close of the year, equal to the transportation of 1,800,000

tons of coal, which could easily be increased to 2,000,000, if necessary. The debts to, and the assets of the company had been again appraised, and were considered to be fully equal in value to their floating liabilities. A large proportion of the bonds due in 1850 had been exchanged for those last issued. A purchase was made from the State, subject to the approval of the stockholders, of the double track railroad, extending from the corner of Broad and Vine streets in Philadelphia, to its connection with the Reading road, about $3\frac{1}{2}$ miles in length, at a cost of \$243,200. Permission to purchase was granted. A serious freshet had occurred in September which did considerable damage to the road; but as its effects were still worse felt by rival carriers, the company were gainers on the whole by the increased business thrown on them.

The increase to the stock in 1851 was \$324,183 which was less than had been authorized by the stockholders at their previous annual meeting, on account of the above mentioned branch and its improvements. The earnings remained about the same as in 1850; but the net profits showed a decrease of \$158,242, which was accounted for by a slight reduction of the freights on coal, and the rates of passenger fare, the former in consequence of the competition carried on by companies transporting the same article from the Lehigh and Lackawanna districts. The quantity of coal carried amounted to 298,768 tons above that of 1850. In consequence of the increased expenditure, the managers were unable to declare a dividend this year, beyond that on the Preferred Stock; but a balance of \$149,697 was carried over to next year's Dividend Fund. The bonded debt of the company was reduced by the operation of the Sinking Fund, \$117,800. The policy of still further increasing the capital stock, and thus becoming able to meet the future increasing business of the road, was urged upon the stockholders. The managers were accordingly authorized to raise a further sum of \$250,000 for the purpose of improving the road and depot purchased from the commonwealth, and adding to the extent and conveniences of Richmond wharf; also to make permanent arrangements with the Mt. Carbon and Pt. Carbon Railroad Company for the use of their track and improvements.

The year 1852 showed the quantity of coal carried to be about the same as in preceding one, with a moderate increase in the gross receipts of the road, and a large addition to its net earnings,—the latter, after deducting \$1,228,639 for working expenses, amounting to \$1,251,987, and yielding as dividend fund the sum of \$527,401. Besides the usual sinking fund and the seven per cent. dividend on the preferred stock, the Managers declared on the common stock one of 2 per cent. in July, and one of 4 per cent. in December of that year. In addition to this, the stock created by the purchase of bonds through the sinking fund, enabled them to distribute of this 8 per cent. to the common and 2 to the preferred stockholders.

The conversion of bonds into stock had taken place to a large extent. But for this the distribution as above would have been much larger.—Prior to the 31st November \$443,000 of the bonds had been converted, and from that date to Jan'y 1853, a further sum of \$705,000, had also been surrendered and cancelled. This diminution of

the company's debt was considered as a favorable evidence of their standing and future prospects.—A rise in the rates of coal freight had been made by the Directors. The general account of the company stood thus

Stock.....	\$4,602,832 00
Do. Preferred.....	1,551,800 00
Do. in place of bonds	
cancelled.....	501,700 00
	\$6,656,332 00
Loans (convertible)	
payable in 1856...	\$10,000 00
Loans (convertible)	
payable in 1860...	4,095,000 00
Loans (unconvertible)	
payable in 1860...	2,398,400 00
Loans (unconvertible)	
payable in 1870...	3,555,400 00
	10,058,800 00
Bonds and mortgage	
November 30th,	
1851.....	\$210,100 00
Bonds issued in 1852	
(net).....	158,900 00
	\$369,000 00
Balance capital account.....	57,825 47

Total..... \$17,141,987 47

The gross income of the road for 1853 was \$2,688,287, from which deducting for working expenses \$1,222,537 left a net revenue for the year of \$1,465,750. The quantity of coal carried was 1,582,248 tons, being 68,664 tons less than in 1852. The charges for transportation, however, had been raised about 12 cents per ton, and the revenue from this article in consequence exceeded that of the previous year. The use of Anthracite coal as a motive power had been constantly increasing, till at the end of this year it reached 60 per cent. of the power engaged in coal transportation. In order to afford facilities to the business expected from their connection with the Dauphin and Susquehanna Railroad, additional Real Estate had been purchased at Richmond, on which a new wharf was constructed; a large addition was made to the number of their coal cars; and several other important improvements in the works of the company were commenced. Dividends of seven per cent. for the year were declared on both Preferred and Common stock. By the Sinking Fund there had been purchased \$111,173 which would be distributed among the stockholders. Several new lines contributing to their business were stated as being about to be opened or constructed, as the Catawissa, Williamsport and Elmira, the Dauphin and Susquehanna the Lebanon Valley, and the Sunbury and Erie, together with numerous branches extending throughout the coal region. Permission to make preparations for the anticipated increase of business was granted by the shareholders, and the Managers were authorized to raise the means necessary for that object.

The General Account of the road, at the close of this year, showed the liabilities of the company to be as follows:

Stock.....	\$5,764,494 56
Preferred do.....	1,551,800 00
	\$7,316,294 56
Bonds.....	9,243,000 00
Bonds and Mortgages on Real Estate	
(net).....	488,800 00
Other Debts.....	856,924 21

Total..... \$17,905,018 77
 being an increase of \$763,031 over 1852. By the operations of the last year (1854), large additions

have also been made to the capital stock. From the report recently published we extract the following from their balance sheet, of 30th November last.

Stock	\$5,764,494 56	
1½ per cent. Common and Preferred Stock added for Sinking Fund.....	109,744 41	\$5,874,238 97
Preferred Stock.....	\$1,551,800 00	
Sinking Fund Stock and 5 per cent. Bonds converted (net).....	70,293 02	1,622,093 08
New Stock created in lieu of Balance of Dividend Fund.....		723,340 54
5 per cent. Bonds (uncon.) due 1860	\$777,600 00	
6 per cent. Bonds (con.) due 1856...	10,000 00	
6 per cent. Bonds (uncon.) due 1860	1,572,800 00	
6 per cent. Bonds (con.) due 1860...	3,389,000 00	
6 per cent. Bonds (uncon.) due 1870	3,469,600 00	9,219,000 00
Bonds and Mortgages on Real Estate		508,800 00
Old Balance unprovided for.....	\$700,886 77	
Expended this year...	539,095 87	
	\$1,239,982 64	
Less paid out of Dividend Fund.....	723,340 54	516,642 10
Total.....		\$18,464,114 64

The receipts for the year were \$3,781,639 91, of which that from coal transportation alone (1,987,854 tons) amounted to over three millions and a quarter. The net profits reached the sum of \$2,140,426 97, or over 11½ per cent. on the cost of the road. After the payments of interest on bonds and floating debt, dividends on Preferred Stock, Sinking and Renewal Fund appropriations, &c., a balance of \$723,340 54 remained as applicable to dividends. By the recommendation of the Officers, this was appropriated to the payment of the floating debt incurred for permanent improvements, and a stock dividend of 10 per cent. was declared in its place.

The company suffered a loss of \$58,600 from the destruction of their shops at Reading by fire. Two new wharves, making 18 in all, were finished, in the early part of the year, at Richmond, besides other valuable improvements. The right to purchase the Willow st. Railroad in Philadelphia, had been secured, and by a vote of the shareholders, it was authorized to be taken on the terms offered, viz \$100,000. The board were also authorized to carry into effect several measures proposed for the completion of works now in progress, and the office of Vice President was created.

The rolling stock of the company at present consists of

121 Locomotives, of which 98 are first-class, and 16 second-class.	
216 eight-wheeled Coal Cars.	
2980 four-wheeled Iron do.	
1963 do. Wooden Cars.	
257 eight-wheeled Freight do.	
557 four-wheeled do.	
34 eight-wheeled Passenger Cars.	
11 do. Baggage and Express do.	

Statement, showing the Cost; Mileage; etc., etc., of the Philadelphia and Reading Railroad from the date of its opening to Dec. 1. 1854.

Year.	Cost.	Mileage.	Cost per mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividends.	Receipts from Passengers.	Receipts from Coal.	Receipts from Freight, and Misc.	Earnings per mile.	Per centage of Gross Earnings.	Do. of Net Earnings.	Tons of Coal carried. (2,240 lbs.)
1842	\$5,866,638	92	\$63,768	\$200,000	\$118,000	\$82,000		\$71,965	\$278,840	\$38,583	\$2,174	3.4	1.4	218,711
1843	7,119,292	92	77,388	385,195	171,638	213,557		92,862	448,508	6,496	4,046	6.4	3.0	421,958
1844	9,467,769	92	102,802	697,613	254,102	443,510		108,411	886,939	70,081	11,718	10.4	4.9	814,279
1845	10,388,580	92	112,875	1,078,081	670,726	607,355		141,749	1,600,667	147,297	20,683	16.4	9.0	1,186,258
1846	11,689,696	92	126,375	1,900,115	862,320	1,037,795	10 per ct. in stock.	156,201	1,668,664	21,771	26,771	11.7	7.6	1,360,681
1847	12,286,559	92	133,006	2,002,945	1,100,405	902,540	do.	174,968	1,386,605	18,897	18,897	11.7	8.3	1,285,044
1848	14,396,468	92	156,483	1,692,555	1,212,029	480,525	do.	156,908	1,648,900	121,348	21,017	11.8	6.0	1,097,762
1849	16,326,032	92	177,446	1,938,590	1,080,828	857,762	do.	165,908	1,648,900	121,348	21,017	11.8	6.0	1,097,762
1850	16,326,032	92	177,446	1,938,590	1,080,828	857,762	do.	165,908	1,648,900	121,348	21,017	11.8	6.0	1,097,762
1851	16,326,032	92	177,446	1,938,590	1,080,828	857,762	do.	165,908	1,648,900	121,348	21,017	11.8	6.0	1,097,762
1852	16,326,032	92	177,446	1,938,590	1,080,828	857,762	do.	165,908	1,648,900	121,348	21,017	11.8	6.0	1,097,762
1853	16,326,032	92	177,446	1,938,590	1,080,828	857,762	do.	165,908	1,648,900	121,348	21,017	11.8	6.0	1,097,762
1854	16,326,032	92	177,446	1,938,590	1,080,828	857,762	do.	165,908	1,648,900	121,348	21,017	11.8	6.0	1,097,762
	18,464,114	96	192,384	3,781,639	1,641,212	2,140,426	10 do.	272,367	3,293,822	256,450	39,392	20.5	11.6	1,967,854

Fractional parts of moneys are omitted.
NOTE.—Seven per cent. dividend has been paid on Preferred Stock since 1848.

* For 11 months only.

Racine and Mississippi Railroad Company.

At a meeting of the Stockholders of this company, held at their office in this city, the following gentlemen were elected Directors for the ensuing year, viz:

Henry S. Durand, Marshall M. Strong, Reuben M. Norton, Elisha Raymond, John Dickson, Charles Herrick, Charles S. Wright,—all of Racine; Simeon D. Clough, of the Town of Racine; Edward Elderkin, Elkhorn, Walworth Co.; William C. Allen, Delavan, Walworth Co.; John Williams, Darien, Walworth Co.; William T. Goodhue, Beloit, Rock Co.; F. W. Merrill, Rockton, Ill.

At a subsequent meeting of the board, Henry S. Durand was unanimously re-elected President, A. J. Redburn, Secretary, and Marshall M. Strong, Esq., Attorney.—*Racine Advocate*.

LAWRENCE SCIENTIFIC SCHOOL, Harvard University.

THE next Term of this Institution will open on the first day of March, 1855, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical Exercises, according to the nature of the Study, will be given in:

Astronomy.....	by Messrs. Bond.
Botany.....	" Prof. Gray.
Chemistry, Analytical and Practical.	" " Horsford.
Comparative Anatomy and Physiology.....	" " Wyman.
Engineering.....	" " Eustis.
Mathematics.....	" " Pierce.
Mineralogy.....	" " Cooke.
Physics.....	" " Lovering.
Zoology & Geology.	" " Agassiz.

For further information concerning the School, application may be made to Prof. E. N. Horsford, Dean of the Faculty.

CAMBRIDGE, Mass., Jan'y, 1855.

6.4t

For Sale.

A LOCOMOTIVE ENGINE and Tender, Cylinders 12x20. Four driving wheels, 4 ft. 6 in. diameter, 4 wheel Truck, 6 wheel Tender and will hold 1,400 Galls. of water, suited for a gauge of 4 ft. 8½ in. Engine will be put in complete order and sold low for good Railroad Bonds.

CLARK & JESUP, General Railway Agents, 38 Exchange Place.

WANTED, STUDENTS in ENGINEERING, SURVEYING and DRAFTING.—Two or three active young men, of intelligence, clever habits, and good education, who may desire to perfect a course of studies and gain a knowledge of the above pursuits, may find an instructor and employer by addressing, in their own hand, with references, Box 177, Cumberland, Maryland.

Terms: First year, tuition in the office and field, use of instruments and scientific library, with \$50 pay for services; second year, advance in pay. 6.3ms

Notice to Contractors.

PHILADELPHIA AND BALTIMORE CENTRAL RAILROAD COMPANY.

THE Philadelphia and Baltimore Central Railroad Company having determined to commence the construction of that portion of their road between the West Chester and Philadelphia Direct Railroad, and the Maryland State line, 34 miles in length, the undersigned will receive Proposals, at the Office of the Company, in Kennett Square, Pa., on the 15th day of February, 1855, for Grading, Bridging and Masonry of those Sections of the Road between the Brandywine and the Maryland State line, which at that time may not be contracted for to residents along the line of the road. The work will be divided into sections of one mile in length or less. The line will be ready for examination on the 8th of February, 1855, at which time plans and specifications will be exhibited, and blank Proposals furnished by T. E. SICKLES, Chief Engineer, at the office of the Company. PAYMENTS will be made to the contractors in cash, monthly, during the progress of the work.

FRANKLIN TAYLOR, President of the Philadelphia and Baltimore Central Railroad Company. 2t5

Notice to Contractors.

NASHVILLE AND NORTH WESTERN RAILROAD.

PROPOSALS will be received at the office of the Nashville and North Western Railroad Company, for the graduation and masonry of said Road in sections of twenty or thirty miles.

The Company reserve the right to reject all the Proposals if none are satisfactory.

The length of the Road is one hundred and sixty miles, and Proposals, are invited from contractors of ability for the entire work, including track, stating what amount of Bonds, Stock and Cash will be received in payment.

Any information required can be received by application to

N. MACNEALE, Chief Engineer.

NASHVILLE, Tennessee, 25th January, 1855. 4t.5

HERRING'S**Patent Fire Proof Safes.**

THE subscriber continues to manufacture his unrivalled patent fire and burglar proof safes, warranted equal to any, and superior to some, of the many which have been tested, as published in notices by the press throughout the world for the last fifteen years, and is sole proprietor of Hall's patent powder proof lock, both having received separate medals at the World's Fair, London, 1851, and New York in 1853-4. Also the patents (by purchase) of Jones' celebrated patent combination and permutation bank lock. \$1,000 in gold was placed in the safe exhibited at the World's Fair London, secured by Hall's and Jones' lock, and offered as a reward to any one who would pick the locks or open the safe within forty-five days, and although operated upon by several skilled in the art of lock picking, no one succeeded in opening the safe, (no change or alteration in the locks or keys having been made during the time,) but the money remained in its safe depository and was returned to the proprietor, and a medal awarded him for the champion safe of the world. Caution—None genuine except those having the subscriber's name on a metal plate.

SILAS C. HERRING,

Green Block, corner of Pine and Water streets, New York.
NB.—The above safes and locks can be had (adding freight) at manufacturers' prices of his authorized agents, in all the principal cities in the United States and Canada.

CAR WHEEL WORKS,

Callowhill & Sixteenth sts.

PHILADELPHIA, PENN.

A. WHITNEY & SONS,

PROPRIETORS.

HAVING erected an extensive establishment for the manufacture of RAILROAD WHEELS, and fitting same on Axles, are prepared to furnish all the different sizes and kinds required. Have patterns for wheels 18, 24, 26, 28, 30, 31, 33, 34, 36, 42, 44, 46, 48, and 54 inches diameter, suitable for HAND TRUCK, MINING, GRAVEL, REPAIRING, COAL, FREIGHT, ACCOMMODATION and EXPRESS PASSENGER CARS, and for LOCOMOTIVE DRIVERS, TRUCKS and TENDERS; spoke or plate form, as may be preferred; and will make patterns, &c., for any other sizes that may be required, when an order is for an amount that will warrant the expense. Having adopted a system of boring wheels and fitting axles, to standard uniform gauges, are enabled to fit with great accuracy, and to furnish wheels bored to replace worn-out wheels of their fitting, without returning the axles. Have made arrangements for procuring the best ENGLISH and AMERICAN ROLLED, and AMERICAN HAMMERED AXLES, so as to be enabled to furnish them on as favorable terms as they can be purchased from importers or manufacturers.

A circular will be sent to persons requesting same, stating prices and terms of payment.

Officers of Railroad Companies, Car Builders, &c., are invited to visit the Works, and examine the mode of manufacture, and manner of fitting wheels on axles. 5.1f

Notice to Contractors.

PROPOSALS for Masonry will be received until the 15th of February, 1855, for the construction of about 7,000 cubic yards of Bridge and Culvert Masonry, said masonry is in the vicinity of Norfolk and also of Petersburg on the Norfolk and Petersburg Railroad. For further information inquire of Wm. MAHONEY, Esq., Chief Engineer, Norfolk, Va., or to the undersigned at Petersburg, Va.

DAVID BISSET.

January 24th, 1855. 5.3t

Notice to Contractors.OFFICE OF METROPOLITAN RAILROAD CO., }
Georgetown, D. C., Dec., 26, 1854. }

SEALED PROPOSALS for the grading, masonry, and bridging of forty-three and a half (43½) miles of this road will be received at the office of the company until three o'clock p. m. on the 15th day of February next.

The maps, profiles, plans, and specifications will

be ready for inspection on and after the 5th day of February.

The Metropolitan Railroad is designed to extend from the cities of Washington and Georgetown to the Balt. & Ohio R. R. by an easy and direct route, connecting with the latter road east of the "Point of Rocks," on the Potomac river, and making a saving of distance on the first ninety miles of the present travelled route from the Capital to the Western and Northwestern States of forty-five miles.

Proceeding from the point of intersection with the Baltimore and Ohio Railroad the route extends to the city of Frederick, and passing through the richest agricultural districts of Maryland, terminates in the city of Hagerstown, where it connects with the lines of railroad now in operation extending to Harrisburg, the Pennsylvania Railroad, &c.

The portion of the road for which proposals are now invited extends, from the westerly line of the District of Columbia (3½ miles from Georgetown) to the city of Frederick.

Proposals will be received for the work in sections of one mile each, or for the entire distance of 43½ miles.

The work generally is of a medium character for this part of the country, with some heavy cutting (in earth and rock) and bridging; and every facility exists for prosecuting it vigorously and with economy at all seasons of the year. The country is elevated and rolling, well watered, and remarkably healthy.

The time conditioned for the completion of the contracts, will be from one to two years.

Any further information desired by persons proposing for the work will be furnished at the office, or may be had by addressing the President of the company by letter prior to the day of letting.

By order of the Board of Directors

FRANCIS DODGE, President.

EDMUND FRENCH, Chief Engineer.

Dec 29 5.

New and Valuable Work for

ENGINEERS, SURVEYORS, &c.

JOHN WILEY, 167 Broadway, New York,

has recently published

A MANUAL OF

Topographical Drawing,

By Lieut. R. S. SMITH, U. S. Army, Assistant Professor of Drawing in the U. S. Military Academy, West Point, N. Y.

Illustrated with COLOURED DIAGRAMS and NUMEROUS PLATES.—1 vol. 8vo.—Price \$1.50.

From the Author of "Roads and Railroads."

"I have looked over Lieut. R. S. SMITH'S MANUAL OF TOPOGRAPHICAL DRAWING, and find it decidedly the best treatise on that subject which has yet appeared. It presents the principles established by the best authorities on this subject, in combination with numerous valuable hints on detail, which have evidently resulted from skilful individual practice.

Yours respectfully,

WM. M. GILLESPIE,

Prof. of Civil Engineering in Union College."

"Rensselaer Polytechnic Institute, December 1854.

Dear Sir—Lieut. SMITH'S treatise while sufficiently comprehensive to meet all ordinary wants either of the Civil Engineer or special Topographer, presents the principal methods of delineation according to the Horizontal and Vertical systems, in a manner at once perspicuous and practical; and, for the adaptation to the purposes of a textbook in class instructions, or for suitability to the needs of self-instruction,—so far as a written guide can take the place of much oral and manual exemplification of the processes incident to any branches of the Graphic Art,—the little Manual appears to leave scarcely anything to be desired.

Its use has been ordered in this Institute.

Yours &c.

B. FRANKLIN GREENE,

Director, &c. B. P. I.

5.2t.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS.—In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF THE ERIE CANAL—EASTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Utica, until Monday, the 12th day of February next, at 11 o'clock in the forenoon, for the following described work, to wit:—

Description of work.	Amount of penalty in bond.	Time of completion.
Section 30.....	\$6,700..	April 1st, 1857.
" 31.....	6,000..	" " 1857.
" 32.....	3,600..	Aug. 1st, 1855.
" 33.....	8,200..	April 1st, 1857.
" 34.....	2,000..	" " 1856.
" 35.....	4,400..	" " "
" 40.....	2,700..	" " "
" 78 and Section No.2 of Rocky Rift Feeder ..	10,000..	" " "
" 83.....	4,100..	" " "
" 84.....	1,200..	" " "
" 129.....	7,400..	" " "
" 1 Rocky Rift Feeder	2,000..	" " "
" 3 do.....	3,600..	" " "
Lock No. 24.....	5,500..	July 1st, 1857
" 32.....	6,300..	" " "
" 39.....	6,600..	" " "
" 41.....	6,200..	" " "
Bridge Abutments on sections 31, 32, 33 and 35.	1,700..	" " 1856.
Do. do. on sections 44, 45 and 56.....	1,300..	" " "
Do. do. on sections 69, 70 and 76.....	2,200..	" " "
Do. do. on sections 77, 79 80 and 84.....	2,100..	" " "
Do. do. on sections 101, 102 and 103.....	2,100..	" " "
Do. do. on sections 104, 106 and 113.....	2,000..	" " "
Culverts on sections 20, 33 and 34.....	1,400..	" " "
Do. on sections 85 and 40.	1,300..	" " 1855.
Waste Weir on Section 30	1,000..	" " 1856.
Dam and Bulk Head for Rocky Rift Feeder....	2,100..	April 1st, "
Culvert under Castle Creek for Rocky Rift Feeder.	2,100..	" " "
Culverts, Bridges & Towing Path Bridge and Drop for do.....	1,500..	" " "
Iron Bridge Superstructure for Main street Bridge, Fultonville....	450..	" " 1855.

BLACK RIVER CANAL.

Sealed proposals will be received at the Engineer's Office at Lyons Falls, until Wednesday, the 14th day of February next at 9 o'clock in the forenoon, for the following described work:—

Clearing and Snagging 42½ miles of Black River from Lyons Falls to Carthage, constructing eight Jetty Dams and Piers, and Dredging the first eight miles of Black River, below Lyons Falls.....	\$14,000..	Aug. 1st, 1856.
Valve Gates for Locks Nos. 98 to 108 inclus..	500..	July 1st, 1855.

ENLARGEMENT OF THE ERIE CANAL—MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office, in the city of Syracuse, until Thursday, the 16th day of February next at 12

o'clock A. M., for the following described work, to wit:—

1 Iron Superstructure for Bridge at Montezuma with penalty in bond of \$300. To be completed the 16th of April, 1855.

ENLARGEMENT OF THE ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office, in the city of Rochester, until Friday, the 20th day of February next, at 9 o'clock A. M., for the following described work, to wit:—

Description of the work.	Penalty in bond.	Time of Completion.
Section 245.....	\$5,300	April 1st, 1857,
" 246.....	6,000	" "
" 247.....	5,700	" "
" 248.....	7,000	" "
" 249.....	6,800	" "
" 250.....	7,100	" "
" 251.....	6,200	" "
" 252.....	7,300	" "
" 253.....	9,000	" "
" 254.....	4,800	" "
" 255.....	6,200	" "
" 256.....	19,000	" "
" 257.....	11,000	" "
" 258.....	13,400	" "
" 259.....	10,800	" "
" 260.....	7,000	" "
" 261.....	5,400	" "
" 262.....	6,300	" "
" 264.....	7,000	April "
" 289.....	22,500	" 1857.
" 290.....	9,200	" 1856.
" 296.....	7,300	" "
Lock 65 and Reducing		
Lock 64.....	5,600	" 1857.
Lock No. 66.....	5,500	" "
Waste Weirs on Sections		
245 to 262, inclusive....	1,000	Nov. 1st, 1856.
Waste Weir on Section 289.	500	" 1855.
Bridge Abutments on Sections		
245 to 252, inclus....	3,200	April 1st, 1857.
Bridge Abutments on Sections		
253 to 262, inclus....	3,400	" "
Bridge Abutments on Section		
289.....	600	" 1856.
Bridge Abutments on Section		
369.....	500	" 1855.
Culverts on Sections 245 to		
253, inclusive.....	9,000	Nov. 1st, 1856.
Culverts on Sections 257 to		
262, inclusive.....	2,500	" "
Culverts on Sections 284		
and 289.....	6,500	" 1855.
Medina Aqueduct Section		
320.....	800	April 1st, 1855.
1 Iron Superstructure for		
Glasgow street Bridge,		
Clyde.....	500	May 1st, 1855.
1 do. for Sodus st., Clyde..	500	" "
1 do. for Church st., Lyons.	600	June 1st, "
1 do. for Monroe street,		
Rochester.....	500	May 1st, "
1 do. for Shelby st., Medina	520	" "
1 do. for Amherst street,		
Buffalo.....	640	" "
1 do. for Ferry st., Buffalo.	760	" "

The Culvert for the Irondequoit Creek on Section 256 must be completed by April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other

person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborers' wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent. of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the Canal Commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to them, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the time specified for the several lettings.

In all proposals where the figures used are of a doubtful construction, such proposal will not be canvassed.

Dated at ALBANY, January 12th, 1855.

HENRY FITZHUGH,
FREDERICK FOLLET,
CORNELIUS GARDINIER, } Canal Comm'rs.
JAMES M. COOK, Comptroller. [34t
JOHN T. CLARK, State Eng. and Surveyor.

Auburn Steam Forge.

THE Forge Works of Smith & Richardson are being removed from Utica to the City of Auburn, Cayuga County, N. Y., where the business of manufacturing Car and Locomotive Axles, and other Shafting, will be continued by the undersigned. They will be prepared to make to order, on short notice, all kinds of small forgings. Their work will be all made after the most workmanlike manner and warranted. Parties wishing work done will find us prepared to contract for large jobs on favorable terms. (The Forge) and Machinery are new, and of the very best kind.

SMITH & RICHARDSON & CO.
Auburn, N. Y., June 1, 1855.

ROBERT POOLE. THOS. M. SMITH. GERMAN H. HUNT.

UNION WORKS,

North street, opposite Calvert Station,

BALTIMORE.

POOLE & HUNT,

IRON FOUNDERS and general MACHINISTS, Manufacturers of STEAM ENGINES, MILL GEARING, RAILROAD CARS and CAR WHEELS, Blowing Machinery, Hydraulic Presses, Sugar and Saw Mills, MACHINISTS' TOOLS of all kinds, Shafting, Pulleys and Hangers, Steam Boilers, Water Tanks, &c.—Castings made every day.

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers' and Wire Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWETT

February 15, 1855.

17 Burling Slip, New York

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

BRIDGES & BRO.,

64 Courtland st., New York.

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE SOUTH AND WEST.



Trains will leave the Southern Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00

An extra charge will be made for meals and state rooms on board the boats.
S. L. SPAFFORD,
27tf General Sup't.

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,

$\frac{1}{2}$, $\frac{3}{4}$, 1 , $1\frac{1}{4}$, $1\frac{1}{2}$ and 2 inches,

Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & Co.,

No. 45 North Water Street, Philadelphia.

July 13, 1854.

28.6m.

RAILROAD CAR GREASE.

James Bayes & Co.,

6 MINOR STREET,

PHILADELPHIA.

MANUFACTURERS OF

SOFT WHITE GREASE,

For Coal and Freight Cars, Heavy Machinery, etc., etc.,

STIFF WHITE GREASE,

For Water-Wheel Gudgeons, Heavy Bearings, Rollers on Inclined Planes; OMNIBUSES, WAGONS, and OTHER CARRIAGES, In Cans, Kegs, and Barrels.

SUPERIOR YELLOW GREASE,

For Passenger Cars, etc., etc.

THE above different kinds of Grease, having been in use for some time past on several Railroads in the United States, can be confidently recommended for their general usefulness and economy.

49 tf
SAMPLE FORWARDED UPON APPLICATION.

To Land Claimants in Texas.

If you have any business in relation to Lands in Texas address
I. W. E. SPOUT, Clarksville, Red River County, Texas, and it
will be attended to promptly. 1.1y

The most magnificent work on Mechanical Engineering
yet published in this country—

JOHN WILEY, 167 Broadway,
publishes this day,
No. 1.

AMERICAN ENGINEERING,
ILLUSTRATED BY LARGE AND DETAILED
DRAWINGS, embracing the various branches
OF MECHANICAL ART. STATIONARY,
MARINE AND LOCOMOTIVE ENGINES,
MANUFACTURING MACHINERY, PRINT-
ING PRESSES, TOOLS, GRIST, STEAM PAN,
and ROLLING MILLS, IRON BUILDINGS,
&c., of the most approved construction.—By
G. WEISSENBORN, Engineer. The drawings in
all cases to be of American Machinery actually
constructed.

ILLUSTRATIONS of iron machinery, of new in-
ventions of all kinds, have long been common;
but they have been generally limited to wood-cuts
of inferior size and value, and have been accom-
panied by general, rather than minute definition
of particulars. Practically they were of no use
to the builder or machinist, being too small to il-
lustrate the work, and not sufficiently definite in
their details to assist materially in the projection
of larger ones. It is proposed in this work to ob-
viate these difficulties by presenting large and
handsomely executed engravings, from correct
drawings. These drawings will be both in large
and detailed views, accompanied by such descrip-
tions as will enable the machinist to fully com-
prehend them, and reproduce the machine without
further aid.

This work is to be issued in monthly numbers,
and will embrace in each two plates, 24 by 30
inches, four plates, 24 by 15 inches, illustrating
minutely the choicest designs in Mechanical Art.
The subject of the designs illustrated will be so
arranged that six parts will be complete in them-
selves.

Each succeeding number will be promptly issued
on the first of each month. Price each \$1.00. [3.4t

**Boiler and Tank Rivets,
Nuts and Washers;
All Sizes of
Bolts and Bolt Ends**

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

Locomotives for Sale.

THE Subscriber offers for sale the following Locomotives
and Tenders, suited for a 5 feet gauge.
One very superior 18 ton Passenger Engine. Driving Wheels.
5½ feet diameter with 8 wheel tender.
One very superior 16 ton Freight Engine. Driving Wheels.
4 feet diameter with 8 wheel Tender.

The above machines are from one of the best shops in the
country, built and finished in the best manner, and can be de-
livered in ten days from receipt of order. To any company in
want of such machines, these are recommended.

For Price, terms, &c., apply to
THOS. M. CASH,
Philadelphia Railway Agency.
No. 80 South Fourth st.
PHILADELPHIA.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to
be completed to the Georgian Bay, Lake Huron a
distance of 96 miles in June next where it will form the shortest
and most agreeable route to the North Western States to Lake
Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64
miles) daily at 8 a.m. and 3.30 p.m., returning the same day—
On the opening of the navigation a Steamer will ply on Lake
Simcoe in connexion with the Trains and will convey passengers
through that Lake and Lake Couchiching to Orillia whence a
short portage of eighteen miles will take them to the waters of
Lake Huron to the Steamer (Kaloohah) which runs to the Sault
St. Marie and intermediate ports forming the most expeditious
and agreeable route to the Mineral Regions of Lakes Huron
and Superior.

Arrangements will be made on the completion of the road to
the Georgian Bay for a line of first class Steamers to extend their
rips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

Railroad Iron Wanted.

THE Undersigned invites proposals till the 27th
day of February next, for the supply of about
nine (9) thousand tons of heavy iron, for the
"Norfolk and Petersburg Railroad."

Delivery to be made at Norfolk, Virginia, be-
tween the first of November next and the middle
of June following, and at the rate of twelve (12)
hundred tons per month.

It is contemplated to use Latrobe's three-part
(compound) rail, and bids are solicited, based
upon a supply of it and of the U pattern also.

WILLIAM MAHONEY,
Chief Eng'r N. & P. R. R. Co.
Engineer Office, NORFOLK, Jan'y 1, 1855. 2.6t

New York and Erie R. R.

On and after Monday, Dec. 25th, and until further notice
PASSENGER TRAINS
will leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 7 a.m. for Buffalo.
DUNKIRK EXPRESS, at 7 a.m. for Dunkirk.
MAIL, at 8¼ a.m. for Dunkirk and Buffalo, and intermediate
stations.—Passengers by this train will remain over night at
any Station between Binghamton and Corning, and proceed the
next morning.

WAY PASSENGER, at 4 p.m., via Suffern for Piermont and
intermediate stations.

NEWBURGH EXPRESS, at 4 p.m. for Newburgh.

WAY PASSENGER, at 4 p.m., for Otisville, and intermediate
stations.

NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.

EMIGRANT, at 5 p.m., for Dunkirk and Buffalo and intermedi-
ate stations.

On Sundays only one Express Train—at 5 p.m.

These Express Trains connect at Elmira, with the Elmira &
Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk
with the Lake Shore Railroad for Cleveland, Cincinnati,
Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Supt.

Railroad Iron.

CONTRACTS for Rails, at a fixed price or on commission
delivered at an English port, or at a port in United States
will be made by the undersigned.

THEODORE DEHON,
10 Wall st., near Broadway, New York.
500 tons T rails on hand 54 to 57 lbs. per linear yard. 1.6m

BUFFALO CAR COMPANY.

THIS Company having now completed their extensive Car
Works are filing orders for the construction of PASSEN-
GER BOX, BAGGAGE, PLATFORM and CATTLE
CARS of the most approved style and finish. The works have
connections with the various lines of railway east and west,
which gives them all required facilities for the delivery of cars
in every direction.

Orders are respectfully solicited, address to the
BUFFALO CAR COMPANY,
Office 37 Pearl st., Buffalo, N. Y.

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and
PASSENGER LOCOMOTIVES of different classes,
with the most modern improvements—

also MACHINISTS' TOOLS,
especially adapted to Railroad Repair Shops, and to the con-
struction of machinery generally. These Tools are of the most
approved construction and consist in part of Engine Lathes,
Hand Lathes, Vertical Drilling Lathes, and Planers of various
sizes and lengths, Compound Planers, Shaping Machines, Slot-
ting Machines, Bolt and Nut Machines, Gear Cutting Engines,
Chucks, Compound Slide Rests, Machines for boring Crank
Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, BOILERS,
SHAFTING and MILL WORK, CASTINGS, and all work
usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Supt., Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, &c., St. Law-
rence County, N. Y.—This well known establishment, hav-
ing attached to it a large and complete Casting House and Ma-
chine Shop, with ample accommodations for workmen, and every
convenience necessary to the prosecution of an extensive
business, together with valuable Iron Mines and Mining Rights,
also Timber Lands, is offered for sale by the proprietor, who re-
tires from the business. The capacity of the Rossie Furnace for
making iron, is believed to be unsurpassed by any charcoal
Furnace in the country, having repeatedly run up to fourteen
tons per day, with 55 to 60 per cent. yield from ore—specular
red oxides—coal, per ton, 100 bushels. The same has been in
uninterrupted operation for over twenty years, and the reputa-
tion of its iron is established throughout the West. The location
of these works is in the village and town of Rossie, county of St.
Lawrence, N. Y., six miles from the River St. Lawrence, and
connected therewith by a plank road. Their cost, apart from
premises and water power, has involved an expenditure of over
\$100,000, and their present efficiency, in every respect, is con-
sidered unexceptionable. For further information apply to D.
W. Baldwin, Agent, at the works, or to the undersigned.

G. FARISH,
Ogdensburg, N. Y., April, 1853.

Winans' Variable Exhaust.

Baltimore, December 26, 1854.

Mr. H. V. POOR, Ed. RAILROAD JOURNAL.

Sir,

I beg leave to inform you that there was grant-
ed to me on the 20th November last, an extension
for seven years from the 26th November, 1854,
of the Letters Patent heretofore granted to me on
the 26th day of November, 1840—for an "im-
provement in the mode of regulating the Waste
Steam in Locomotive Engines," usually known as
the VARIABLE EXHAUST.

Without encumbering this notice with the spe-
cification at length, I subjoin below the claim
thereof,

And remain, very respectfully,

Your obedient servant,

ROSS WINANS.

"As already observed, there may be many
contrivances for opening and closing the orifices
of the pipes, besides the two above described;
these two, however, will answer the purpose, and
illustrate my object. I do not claim the plan of
increasing the natural draught, by causing the
steam from the cylinders to enter the chimney
through diminished orifices, but I do claim as my
invention, desiring to secure the same by Letters
Patent, the plan of increasing or diminishing the
force with which the Steam from the cylinders
enters the chimney, at the PLEASURE OF THE EN-
GINE-MAN, WHILE THE ENGINE IS IN USE OR MOTION,
by enlarging or contracting the orifices of the es-
cape pipes, increasing or diminishing thereby at
PLEASURE the draught of the chimney, in the man-
ner above set forth; not intending by this claim
to limit myself to the precise arrangement of the
respective parts, as herein described, but to vary
the same as I may think proper, whilst I attain
the same end by means substantially the same."

Witnesses: ROSS WINANS.

THOS. P. JONES,
GEO. WEST.

[4.4t.

British Advertising Agency.

ADVERTISEMENTS and Communications received for
all the London, Provincial and British Colonial News-
papers, by the undersigned at their Office, 11 Clements Lane,
Lombard st., London. ALGAR & STREET.
English Newspapers supplied.

VIRGINIA

**Locomotive and Car Manu-
facturing Company,**

ALEXANDRIA, Va.

T. PERKINS, Pres't. R. C. SMITH, Treas'r.

MANUFACTURE LOCOMOTIVE ENGINES, CARS
OF EVERY DESCRIPTION, STATIONARY EN-
GINES & BOILERS, CHILLED CAR WHEELS AND
AXLES. 1t

EDDY'S

**Patent Car Locomotive and
Tender Wheels.**

GEORGE W. EDDY of Waterford, New York, is prepared
to execute orders to any extent for his well known and
fully tested double plate and solid Hub Wheels, fitted to axles
as required. Wheels of this pattern have been in general use
for eight (8) years by the various railroad companies through-
out the United States and Canada as well as on many roads in
Great Britain. In the manufacture of these wheels they under-
go no annealing process which gives them a deeper and harder
chill than those of any other manufacture.

W. F. SHATTUCK, G^l Ag't, 229 Broadway, N. Y.

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G. WEISSENBORN, Civil Engineer and draughtsman 131
Fulton St. up stairs; also gives his attention to the en-
graving of maps, and machinery on stone. Locomotives are
neatly lithographed at this establishment on the most reasona-
ble terms.—Orders are solicited. 50.1t

Railroad Iron!

500 TONS No. 1 Gtengarnock Scotch Pig Iron in lots to
suit purchasers for sale by

NAYLOR & CO.,

90 and 101 John st.
N. B.—The above Iron constantly imported. 32.1t

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
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E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

PHILADELPHIA RAILWAY AGENCY

AND
General Furnishing Depot
 OF ALL ARTICLES REQUIRED BY
RAILROAD COMPANIES,
No. 80 South Fourth street,
PHILADELPHIA.

Railroad Chairs, Railroad Spikes, Car Wheels, Car Axles, Boiler and Tank Rivets, Bolts, Nuts, Washers, Car Lanterns and Lamps, Conductors' Lanterns,	Engineers' Lanterns, Locomotive Head Lights, Car and Switch Locks, Jack Screws, Vises, Patent Oil Cans, Steam Gauges, Steam Whistles, Spring Balances,
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ALL orders promptly filled at manufacturers' prices and forwarded with despatch. Particular attention paid to contracting for Locomotives, Cars, Railroad Iron, &c.

The subscriber being Agent for several manufacturers of Machinery Tools is enabled to furnish Railroad Companies with Lathes, Planing Machines, Drills, &c., of the best quality at manufacturers' prices.—Orders solicited

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THOS. M. CASH.

SEYMOUR, MORTON & CO.,

GENERAL RAILROAD AGENCY,
Office, Metropolitan Bank Building, No. 110 Broadway.
HAVE to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:
LOUISVILLE CITY BONDS, at 38 years.
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.
MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.
LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCullum's Patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Hammit's Patent Reclining Car Seat

for Night or Day Travelling.

THE subscriber, having been appointed sole agent for the sale of this Seat, begs to call the attention of Railroad Officers to this valuable improvement for comfort in Railroad Travelling. They can now be furnished at about the same cost as the ordinary car seat, and with the manufacturer's present arrangement, they occupy but little more space in the car.

THOS. M. CASH,

40 6ms

No. 80 South Fourth st., PHILADELPHIA.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.

December 18, 1862.

WM. S. SAMPSON, Agent.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen to the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,

Feb. 9, 1863.

1 Chamber street, New York.

ENGINEERS.

Atkinson, T. C.,
 Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
 Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,
 Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
 Office 123 Chambers st.

Clement, Wm. H.,
 Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
 Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
 Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
 Steam Marine and Railway Engineer,
 64 Broadway, New York.

Davidson, M. O.,
 Civil and Mining Engineer, Baltimore, Md.

C. Floyd-Jones.,
 Division Engineer 3d and 12th Divisions.
 ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Gay, Edward F.,
 Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
 Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,
 St. Lawrence and Atlantic Railroad, Toronto, Canada.

Grant, James H.,
 New Orleans and Nashville R. R., Niojack, Tenn.

Holcomb, F. P.
 Chief Eng. Augusta and Waynesboro, and Savannah and P. uscola Railroads, Martha'sville, Macon Co., Ga.

S. W. Hill,
 Mining Engineer and Surveyor, Eagle River,
 Lake Superior.

Huger, T. P.,
 Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,
 Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley Railroads, Pittsburgh, Pa.

Samuel McElroy,
 Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
 Sackett Harbor and Saratoga R. R., 24 William St., N. Y.

Morris, Ellwood,
 Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
 Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,
 Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,
 Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
 Civil Engineer, Office 73 South 4th st., Philadelphia.

Priehard, M. B.,
 East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
 Chief Engineer Alleghany Valley Railroad, Pittsburgh, Pa.

Shanly, Walter,
 Chief Engineer Bytown and Prescott Railway,
 Prescott, Canada.

Roberts, Solomon W.,
 Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
 South Side Railroad, Virginia.

Straughan, J. R.,
 Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,
 Pottstown, Pa.

Charles B. Stuart,
 Civil Engineer, New York.

Edward W. Serrell,
 Civil Engineer, 157 Broadway, New York.

Trautwine, John C.,
 Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
 Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
 Chief Engineer, Susquehanna Railroad, Harriabu Pa.

Whipple, S.,
 Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young
 HAS removed his Engineering and Surveying Instrument Manufactory to No. 33, North Seventh Street, Philadelphia.

BUSINESS CARDS.**Railroad Instruments.**

THEODOLITES, TRANSIT COMPASSES AND LEVELS on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by
E. & G. W. BLUNT,
 New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,
 OF THE UNITED STATES NAVY YARD,
 PENSACOLA, FLORIDA.,

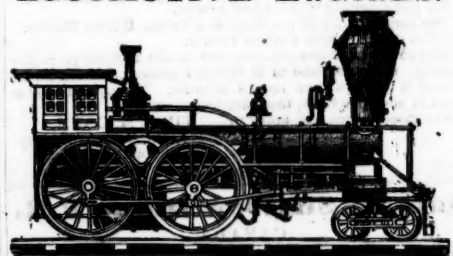
PATENTEE OF THE
HERRON RAILWAY TRACK
 Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad

W. G. ATKINSON,
 MINING ENGINEER, SURVEYOR AND DRAFTSMAN
 CUMBERLAND, MARYLAND,
 Will attend to business in his Profession in the Coal Region as vicinity.

REFERENCES:
Jerry Cowles, Esq., New York.
Col. Wm. Young do.
Jas. W. McCulloh, Esq., late U. S. Treas., Washington.
 June 25, 1853.

H. SAWYER
 (of the late firm of SAWYER & HOBBY),
 Manufacturer of Transits and Levels,
 HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

J. S. Sewall,
 CIVIL ENGINEER,
 ST. PAUL MINESOTA.

LOCOMOTIVE ENGINES.

THE
AMOSKEAG MANUFACTURING COMPANY,
 at **MANCHESTER, N. H.,**

MANUFACTURE LOCOMOTIVE ENGINES of every description, and of the most approved patterns, at short notice. Also, **STATIONARY STEAM ENGINES, Boilers, Cotton and Woolen Machinery, Tools, Turbine Wheels, Mill Work, and Castings** of every description. Address
WM. AMORY, Treasurer, C. W. BALDWIN, Agent,
 50f 65 State st., Boston, Ms. Manchester, N. H.

Faggotted Car and Engine Axles

FORGED BY RANSTEAD, DEARBORN & CO., BOSTON,
 Mass.
 These Axles are drawn from the faggot entirely by the hammer, and are all warranted.